DIY CINEMA: DETAILS MAKE THE DIFFERENCE



HOME CINEMA Choice

Reviewed MARANTZ UD7006 3D BD DECK
SAMSUNG 60IN LED TV LG CINEMA 3D MONITOR

200TH ISSUE SPECIAL! HOME CINEMA THE INSIDE STORY

Star Wars® Saga: best Blu-rays ever?

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Tron-themed project adds the extra dimension

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Pioneer's pack leader
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Future Publishing Limited
2 Balcombe Street, London NW1 6NW
Tel: 020 7042 4000 Fax: 020 7042 4539

EDITORIAL
Editor Chris Jenkins
Deputy Editor Mark Craven
News Editor Anton van Beek
Art Editor John Rook
Production Editor Jill Lubetkin
Tech Labs Manager James Waldron

CONTRIBUTORS
Richard Stevenson, Adrian Justins, Steve May, John Archer, Adam Rayner, Danny Phillips, Martin Pipe, Marc Chacksfield

Photography Rob Monk, Kevin Nixon, Will Ireland
Creative Director Robin Abbott
Editorial Director Jim Douglas

ADVERTISING
Advertising Director James Ranson 020 7042 4163
Senior Advertising Manager Ashley Snell 020 7042 4246
Senior Sales Executive Julian Tozer 020 7042 4273
Senior Sales Executive David Priestman 020 7042 4266
Sales Executive Lucie Gillespie 020 7042 4252
Advertising Fax 020 7042 4159
London Sales Director Malcolm Stoodley
Ad Director Central Sales Jude Daniels 020 7042 4105

MARKETING
Brand Marketing Manager Libby Brook

CIRCULATION
Trade Marketing Director Rachel Cock

PRINT & PRODUCTION
Production Managers Ralph Stringer, Roberta Lealand
Image manipulation James Wootton, Steven Wood
Covers and text printed in the UK by William Gibbons
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LICENSING
Head of International Licensing
Tim Hudson, thudson@futurenet.co.uk
Tel: + 44 (0)1225 442244 Fax: + 44 (0)1225 732275

FUTURE PUBLISHING LIMITED
Group Publisher Pat Eggington
Publishing Director Stuart Anderton
Chief Executive Mark Wood

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Chief Executive: Stevie Spring
Non-executive Chairman: Roger Parry
Group Finance Director: John Bowman
Tel +44 (0)20 7042 4000 (London)
Tel +44 (0)1225 442244 (Bath)

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WELCOME



to the 200th issue of Home Cinema Choice! We've come a long way since the magazine's launch in 1995, when LaserDisc and CRT TVs ruled. Now we're all geared up for massive flatscreens, multichannel sound, 3D and smart devices. But the essential thrill of reproducing the cinema experience at home is still the same.

It's appropriate, then, that **in this issue we celebrate the long-awaited Blu-ray release of the movies that define big-screen entertainment, the *Star Wars* saga.** On page 28 we share the secrets of the Blu-ray production process, while on page 31 we review the entire set.

Of course, we don't neglect hardware and this issue's reviews include a Panasonic system (which comes, conveniently, with *Star Wars* Blu-rays – see page 58), as well as some stunning Scandyna speakers on page 54, and a mind-blowingly good Pioneer AV receiver on page 44.

So, read on, and may the force of home cinema be with you always!

Chris Jenkins

Editor

TEAM HCC

Chris Jenkins: Industry veteran Chris remembers when movies came on stone tablets 

Mark Craven: *HCC*'s Deputy Editor is as passionate about AV gear as he is about Jason Statham 

Anton van Beek: Anton's love of cinema makes him the fount of all movie knowledge 

James Waldron: Taking on our tech testing calls on James' in-depth audio engineering skills 

Jill Lubetkin: Jill's magazine skills mean that even the techiest articles make perfect sense 

John Rook: Art Editor John was here when amps were all silver the first time around 

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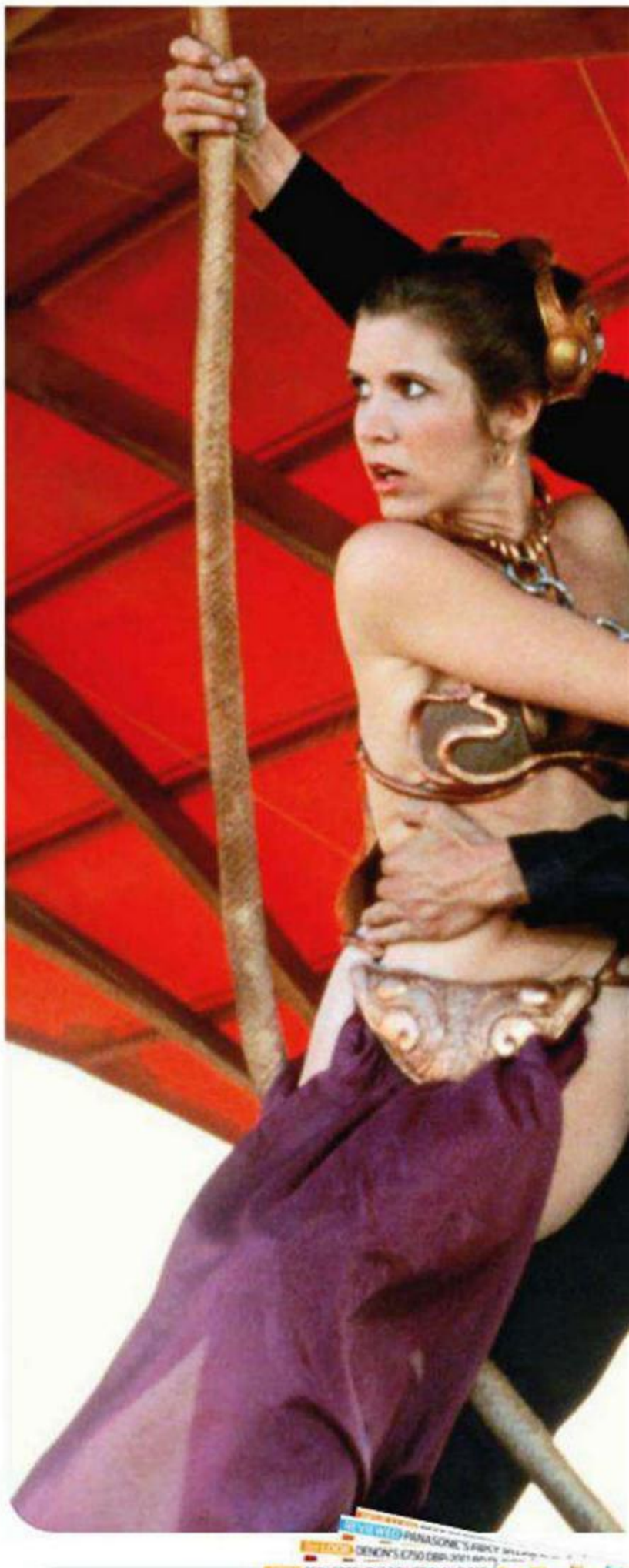


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Creating your own cinema
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TECH LABS

Our guarantee to you:
Equipment reviewed in *Home Cinema Choice* is measured and quantified by Future Tech Labs, which for more than 15 years has set the standard for independent AV test & measurement. The findings of the Tech Labs are used to underpin the subjective opinions of our Reviews team, ensuring that you receive the best possible advice when it comes to planning your next purchase

CO-STARRING

This issue's team of expert writers are the best qualified in the business

Adam Rayner: The UK's foremost expert in extreme audio writes about bass, hi-fi and cartoons



Richard Stevenson: Industry veteran and former Editor of UK CE trade journal *ERT*



Steve May: *HCC*'s former Editor-in-Chief is one of the UK's most respected AV journos



John Archer: The UK's most experienced TV tester cut his teeth as an early *HCC* staffer



Martin Pipe: Technology specialist Martin co-developed *HCC*'s Tech Lab operation



Adrian Justins: Made his name as the editor of *What Video & TV* and *What Home Cinema*





Star Wars on Blu-ray p26

We reveal the soundtrack secrets behind the biggest release in the history of home cinema, and give our verdict on the *Star Wars: The Complete Saga* Blu-ray boxset













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Tasty: Sucker Punch BD, p89

Play it your way

The new VSX-921 receiver, with iControl AV2 for iPhone®, iPad® and iPod touch®.

Available on the App Store

The new iControlAV2 App from Pioneer

Built on the success of the original app, iControlAV2 has been redesigned from the ground up to let you use your iPhone, iPod touch and now your iPad as an advanced control centre for compatible networked AV receivers.

And it is awesome.

Scan using a QR code reader.



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www.pioneer.co.uk

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BULLETIN

→News highlights **ONKYO** Flagship TX-NR5009 AVR unveiled **AMBX** 'Ambilike' tech spreads the light beyond TV **ROLAND EMMERICH** Why the *2012* director isn't seduced by 3D **SONY** Latest Elevated Standard home cinema projector **NEWS X10** Hot stories in bite-size chunks **JURASSIC PARK** Dino-classics are back in cinemas and out on BD **AND MUCH MORE!**

Projecting power

Panasonic PT-AT5000E→www.panasonic.co.uk



It's been a long two years since Panasonic released its PT-AE4000, the last in its long line of award-winning projectors. But the wait for a replacement comes to an end this month with the release of the PT-AT5000E. Redesigned from the ground up, it is the company's first full HD 3D projector, and uses transparent LCD panels driven at 480Hz combined with proprietary Overdrive Technology to reduce crosstalk. Other specs include 300,000:1 contrast ratio, 2,000 lumens brightness, 2D-3D conversion and even individual Waveform Monitors for the left and right eyes, to ensure the optimum stereoscopic effect. Pricing was [illegible] going to press.

HCC Online...

Looking for breaking AV news, blogs, features, & reviews? For your daily fix visit us at www.homecinemachoice.com Follow us on Twitter @hccmag



The art of noise

Onkyo TX-NR5009 → www.uk.onkyo.com/en

Never one to rest on its laurels, home cinema audio specialist Onkyo has released a new top-of-the-range AVR, the £2,700 TX-NR5009, to supplement its entry-level and mid-range models. This 9.2-channel powerhouse is the follow-up to the company's award-winning TX-NR5008, and boasts THX Ultra2 certification and a claimed power output of 9 x 220W – or more than enough to generate plenty of neighbour-annoying volume. The unit also features eight HDMI inputs/two outputs (two inputs and one output are gold plated), DLNA 1.5-compliant media streaming and 4K (3,840 x 2,160) video upscaling.

Partner with...

Pioneer BDP-140

3D Blu-ray player → £170 Approx



While Pioneer's latest Blu-ray player arrives with a budget price tag, it hopefully doesn't sacrifice the refined AV performance that the company is known for. In addition to the expected 3D playback and network functionality, Pioneer promises enriched video and audio performance, the second of which should make it a fine partner to Onkyo's stomping new AVR.
www.pioneer.eu

3D Ready PVRs



Panasonic is expanding its HD recorder line-up with two models. Arriving soon is the DMR-HW100, the company's first Freeview HD+ hard-disk recorder, while towards the end of October we can expect the DMR-PWT500, which combines all of the features of the DMP-BDT210 Blu-ray player with a Freeview HD+ HDD recorder. Both models have 320GB hard drives and Panasonic claims they have 'the future proof capability to record 3D HD when it becomes available on Freeview and the ability to convert any 2D recording to 3D, even when time-shifting'.
www.panasonic.co.uk

Front of the Q



Q Acoustics is upping the ante with its 7000 Series 5.1 speaker package. It consists of a Q7000 subwoofer with a 10in ultra-long throw bass driver and a quintet of high power, full range satellites with twin, custom-designed 2.95in ultra-long throw bass/mid drivers and a bespoke 1in Ring Radiator tweeter. The baffle enclosures are cast in aluminium with damping material applied to eliminate cabinet resonance. The system will cost around £800 and is available in gloss white or black. Matching floor stands will set you back around £125 per pair.
www.qacoustics.co.uk

NAD's built to last



NAD has launched a mid-range AVR with its award-winning Modular Design Construction – ensuring that 'customers have the comfort of knowing their investment will not become prematurely obsolete.'
The T 757 will retail for around £1,500, and will include a 7.1 receiver with four HDMI inputs and one output that can pass 3D video. Lossless audio formats Dolby TrueHD and DTS-HD Master Audio are supported. Other connections include a 12V trigger and RS-232 for integration into an automated home cinema system.
www.armourhome.co.uk

Time is right for 3D projection

Epson is ready to take a punt on HD 3D products for home cinema

Epson has unveiled its debut range of full HD 3D projectors, as well as the world's first home cinema projector to have an iPod docking station.



Its home cinema range is spearheaded by the EH-TW9000 and the EH-TW9000W, both of which claim to offer the brightest 3D images on the market, thanks to luminance enhancement and 3LCD technology. These achieve a white and colour light output of 2,400 Lumens, supported by a contrast ratio of up to 200,000:1 that, Epson says, negates the need to darken the room.

This high 3D brightness is achieved by doubling the refresh rate from 240Hz-480Hz, which dramatically reduces the blackout period between left and right eye images.

These range-topping models are joined by the EH-TW5900, EH-TW6000 and EH-TW6000W. Prices for all models are yet to be confirmed.

The EH-TW9000W and EH-TW6000W are also the first wireless-enabled full HD 3D projectors doing away with cables. All models also boast two HDMI inputs, while the 6000 and 9000 series models are supplied with active shutter glasses (one and two pairs respectively).

'We have previously stated that Epson would hold back on developing 3D home cinema projectors until we were confident that there was a strong commitment from content providers for [illegible] idson.



Careful timing: Epson have waited for 3D content to grow

'With the projection that 27 per cent of households will be 3D-capable by 2015 and over 40 3D video game titles expected to be released this year, now is the time for Epson to release its 3D projectors and give viewers the ability to watch 3D content on the big screen.'

Dotting the i's

And in an unusual move, the company has also launched an HD Ready 3LCD projector with a built-in iPod, iPhone and iPad docking station. Simply plonk your Apple device on the unit and it's good to go, playing music through the built-in 10W speakers, as well as displaying your videos and photos on the 300in screen.

The brand's 3LCD technology offers a light output that's quoted as 2,800Lumens and contrast ratio of 3,000:1. On the downside, it's a 720p model, which doesn't offer any high-definition capability.

The range is completed by the EH-TW480, a 720p projector designed with movies and gaming in mind, but with a price tag that's easier on the wallet. It also delivers 2,800Lumens of brightness and a 3,000:1 contrast ratio.

In July, *Home Cinema Choice* was treated to an exclusive demo of these products at Epson's factory in Shenzhen, China and they looked impressive. Look out for an in-depth report on Epson's facility and projectors reviews in a future issue of *HCC*.

Playlist...

Team *HCC* reveals its Playback picks of the last month

Voyage to the Bottom of the Sea: Season Three (R2 DVD)



The camp undersea sci-fi continues with such 'monster of the week' delights as dinosaurs and a rather mangy Wolfman. *CJ*

Taxi Driver: 35th Anniversary Edition (All-region BD)



The picture quality of this remastered BD is a revelation – if only Grover Crisp could oversee every HD restoration. *MC*

The Lavender Hill Mob (Region B BD)



A dizzying descent of the Eiffel Tower is just one highlight. *JL*

Dazed and Confused (All-region BD)



Universal holds back on the DNR and serves up a very film-like Blu-ray of Richard Linklater's quotable cult favourite. *JW*

The Guardian (R2 DVD)



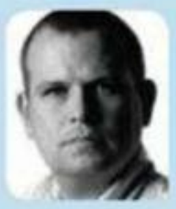
A surprisingly good showcase for William Friedkin's brilliantly silly horror with baby-snatching nannys and killer trees! *AvB*

Talkback

Team *HCC* discusses the importance of lighting in home cinema



Being able to control lighting is one of the main differences between a home cinema and a living room. Companies such as Creston and Lutron understand this and sell very expensive systems to manage lighting. amBX's systems could put this power into everyone's hands and, as Neil MacDonald pointed out, it's not just about being able to find your chair in the dark, or adding an extra dimension to games. Whole-house lighting control can set the mood for your entire lifestyle. Is this the next big thing in household automation? **CJ**



There's certainly nothing wrong with the idea of bringing lighting control to the masses. Indeed, it's one of those wonderful touches that adds both a touch of class and enhanced practicality to any home cinema. However, this curious decision to develop something akin to Philips' Ambilight system is just beyond me. The idea of people defacing their home cinemas or (more likely) living rooms with interactive ambient lighting makes my stomach turn. As far as I'm concerned, they'd be better off adding the extra money to whatever budget they put aside for the TV itself. **AvB**

Seeing the light with amBX

Philips' spin-off offers flexible LED lighting solutions

Home cinema 'mood lighting' has been around for some time, with Philips trying to popularise the Ambilight system built into its TVs. Now comparable technology is available in a choice of standalone systems from amBX.

Set up by ex-Philips employees, amBX licenses its software lighting control systems for use in various hardware solutions. In one, the £99 Cyborg from Mad Catz, twin LED lighting units run off the USB port of a PC. The lights can use up to 16 million shades of colour, operating from scripts embedded in several hundred games software titles, on a sound-to-light principle using a choice of various presets, or off user scripts written with controller software. You can add extra lights using a USB hub.

The system is on sale at the Gameshark website, where you'll find more information at http://store.gameshark.net.

Light on the rack

More ambitious still is the amBIENT XC lighting controller, a rack-mounting system designed to be configured by professional system installers. Using the industry standard DMX lighting control format, it turns HDMI signals into spectacular lighting display, using industry-standard LED lighting units connected via XLR sockets. These cool-running lights use low power and come in a variety of shapes and sizes including floorboxes, uplighters, downlighters and strings – in fact just about any configuration you can think of for home cinema, domestic lighting, commercial display or even industrial uses.



Neil MacDonald, Chief Executive of amBX; ahead of the lighting control industry

amBX's Neil MacDonald says 'The amBIENT XC has been called 'the coolest controller on the planet'. It can analyse audio and video input signals and address lights in 27 regions. There are thousands of preset modes and the user has touch-panel control over basic parameters such as saturation and colour, and there's a wide range of control options including RS-232. It's far more flexible and controllable than existing lighting control units – we're way ahead of the dedicated lighting control industry, and as the system uses industry standard DMX LED lighting units it's an easy plug-and-play option for any installer.'

We'll be reviewing both the Mad Catz Cyborg and the amBIENT XC soon. Meanwhile, there's more information about amBX on its website at www.ambx.com.



amBX lighting: Cyborg and amBIENT XC set the mood for games and movies

Sony PJ goes 3D



October sees the UK debut of Sony's new VPL-VW95ES 3D projector, successor to its award-winning VPL-VW90ES. It offers 2D-3D conversion, extra picture positions, better 3D glasses (24 per cent lighter), Iris 3 contrast enhancing, 150,000:1 dynamic contrast and a motorised adjustable lens shift. 'Customer feedback on the VPL-VW90ES was carefully considered and changes were made to ensure the VPL-VW95ES gives viewers the best home cinema experience yet,' says Tak Nakane, product manager Sony Professional.

Skinny LG 3D TV



LG Electronics has been showing off its new flagship Cinema 3D (read: passive technology) Nano Full LED 3D TV range. The Nano Full LED backlight technology used means that they are also LG's thinnest screens to date – at just 26mm. Available in a choice of 47- and 55in screen sizes, the TVs have built-in wi-fi, Smart TV functionality (with a whopping 175 apps, including BBC iPlayer, Facebook, Twitter and Blinkbox), integrated web browser, four HDMI inputs, and they ship with LG's 'Magic Remote' controller and [illegible] pairs of 3D glasses.
[illegible]e.com/uk

BD for beginners



Aimed at absolute Blu-ray beginners, Sony's diminutive (just 290mm wide) BDP-S185 Blu-ray player doesn't bother with any 3D bells 'n' whistles. Instead it's content to deliver top-notch HD picture and audio performance for just £100. The player also using 47 per cent less power than its BDP-S370 predecessor. All of which doesn't mean it completely skimps on features, as the inclusion of Sony's Bravia Internet Video network functionality means that users can also access YouTube, iPlayer, Demand 5 and stream movies via LOVEFiLM.
www.sony.co.uk

Green light for BD



Superhero sci-fi spectacular *Green Lantern* will blast off on DVD, Triple Play Blu-ray and 3D Blu-ray in the UK on October 17. As well as the 114min Theatrical Cut, both BD releases will feature a 123min Extended Cut, but the latter will only play in 2D. Other Blu-ray features include a Maximum Movie Mode picture-in-picture experience, deleted scenes, two featurettes (*Ryan Reynolds becomes Green Lantern* and *The Universe According to Green Lantern*) and a promo spot for the forthcoming *Green Lantern* animated series.
www.warnerbros.co.uk

Monster marathon

Jurassic Park: Ultimate Trilogy → Universal Pictures → All-region Blu-ray

Now that the *Star Wars Saga* is out of the way, home cinema fans can start getting excited about the long-awaited debut of Spielberg's *Jurassic Park* on Blu-ray. Arriving on October 24, this three-film boxset looks set to rival George Lucas' space opera for Blu-ray release of the year with its fearsome DTS-HD MA 7.1 soundtracks (the thought of those T-Rex footsteps booming out of our subwoofers has already got the *HCC* team salivating), remastered visuals and plentiful extras. The first film will be hitting cinemas again from September 23 in the run-up to the release.

Tech Diary

Our calendar is here to make sure you don't miss out...

→ SEPTEMBER

23: Drive



This award-winner about a stuntman who moonlights as getaway driver hits UK cinemas this Friday.
www.iconmovies.co.uk

26: Thor
Kenneth Branagh's smashing big-screen take on the mightiest of all Marvel superheroes is available to own on DVD, Blu-ray and 3D Super Play Blu-ray in the UK from today.
www.paramountpictures.co.uk

→ OCTOBER

3: Spartacus: Gods of the Arena
Whet your appetite for *Spartacus*' upcoming second season with this prequel miniseries, which brings six episodes to DVD and BD in the UK today.
www.anchorbay.co.uk



7: Don't be Afraid of the Dark
This Guillermo Del Toro-produced remake of a 1973 TV movie, about a family who move into a house with a dark secret, is out today in cinemas.
www.optimumreleasing.com



12: The Three Musketeers 3D
Paul WS Anderson directs this steampunk-influenced take on the popular story, which brings swordplay into 3D! From today at cinemas across the UK.
www.entertainmentone.co.uk

14: Real Steel
Hugh Jackman stars in a world in which robots have replaced people in the boxing ring. Find out if it lands a KO at the UK box office when it hits cinemas today.
www.disney.co.uk

17: Pulp Fiction
What do they call a Quarter Pounder with Cheese in France? Quentin Tarantino's most popular film finally makes its bow on Blu-ray in the UK today.
www.lionsgatefilms.co.uk

20: HCC #201
Your favourite home cinema magazine hits the stands today don't miss it!

Doom merchant down on 3D

The director of *2012* is not a fan, but other movie makers disagree

The thorny topic of 3D was back in the limelight at London's recent Big Screen film festival, with movie makers clashing over its merits.

By far the biggest 3D dissenter at the event was Hollywood A-lister and disaster maestro Roland Emmerich. When pushed for his opinion on 3D film-making, the writer-director, best known for apocalyptic pot boilers *The Day After Tomorrow* and *2012*, was quick to confirm he's not a fan.

Shrugging his shoulders, he declared: 'To be honest, I'm not sure what 3D really adds to the film-going experience.'

However, he said he could understand why *Avatar* worked: 'James Cameron is not only a film-maker, he's a deep-sea diver and with *Avatar* he (literally) set out to submerge his audience.'

According to Emmerich, Cameron created a cinematic experience which was like wearing a diving helmet, 'the audience was transported to a new world that you could only view through 3D glasses.'

The director may yet change his mind, though. Emmerich has signed up to produce two sequels to his alien invasion smash *Independence Day*. It's difficult to imagine that Studio backers Fox won't want *ID4-Ever* Parts 1 and 2 to be 3D spectaculars.

Elsewhere at the festival, Matt Bristowe, Head of Production at 3D post-production house Prime Focus (which is working on next year's *Star Wars* 3D return), defended the technology. He blamed the haphazard nature of 3D cinema presentation for growing consumer dissatisfaction with 3D movies, arguing that people are being turned off by the dimness caused by 3D glasses.

'We have a real problem in the industry when it comes to getting 3D cinemas up to a consistent level of brightness.' The cause is 'too many different projection systems and competing technologies, from Real D, Dolby 3D, XpandD etc. We need to have a uniform standard for brightness levels.'



Emmerich (left): Not sure benefit 3D gives to film-goers



Judge Dredd: 3D could be very different

Not terribly bright

The issue is fast becoming a *bête noire* for film-makers. Both David Yates (director of *Harry Potter and the Deathly Hallows: Part 2*) and Michael Bay (*Transformers*) have written directly to projectionists in an effort to ensure their films were displayed with optimum illumination.

'I think the cinema business could live with two rival systems – so long as they both applied the same technical standards.'

Bristowe maintained that it's still early days for the tech, particularly from a creative point of view, but said he's particularly excited by the 3D on the upcoming *Judge Dredd* movie. 'Cinematographer Anthony Dod Mantle is a creative maverick and I think we're going to see something very different.'

20-room HD fun



Vivadi's trio of modular HDD systems is a new way of entering multi-room home entertainment. The range kicks off with the £3,000 DVD and BD-compatible 'Family' AV system that uses an MM311 Media PC, plus a Dune B1 and two Dune H1 media streamers for use in a four-room network. For £4,000 you get the 'Luxury' system, which offers twice the storage (4TB) and support for 3DTV and 7.1-channel HD audio. The £9,000 'Premier' system with an 8TB media server is designed for use in a 10-room network.
www.arma-av.co.uk

Loewe get active



Loewe is adding a trio of stereoscopic screens to its Art and Connect ranges. The 40in Connect 3D, plus 40in and 46in Art 3D, all use active shutter technology and built-in 2D-3D conversion. The screens also feature Loewe's MediaPortal smart TV service, with a full web browser, Napster and media playback from your PC or USB device. Prices for the Art 3D screens are as yet unknown, but the Connect 40 3D will start at £2,500, although the bespoke nature of Loewe TVs means this will rise with the extras – such as a built-in DR+ hard disk.
www.loewe-uk.com

HD everywhere



HDanywhere is promising an easy DIY solution to 'whole house' HD video distribution with control at every display location using its new 1 x 4 HDTV Multiroom Pack. The £500 system consists of a 1 x 4 HDTV Multiroom Hub that converts the HDMI signal, so that it can be transmitted uncompressed along Cat5e/6 cable without losing definition, plus four passive Display Receivers that convert it back to HDMI. A special SkyHD package with three additional Sky remote controls is also available for around £550.
www.hdanywhere.co.uk

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What Hi-Fi? Sound and Vision (July 2011)

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This month's top 10 news stories in handy, bite-sized chunks...

News x10

1 Be a 'bot



Just when you thought 3D headwear couldn't get any more stupid, along comes Sony with its HMZ-T1 'Personal 3D Viewer'. The *Tron*-esque headset is designed to connect to a Blu-ray player or games console/PC and features two independent 0.7in OLED panels (meaning there's no crosstalk) and built-in headphones with pseudo-5.1 audio technology. Buy it for ¥60,000 (£480) when it goes on sale in Japan this November.

2 Jobs' job goes to COO

Following serious health issues, tech legend Steve Jobs has resigned from his position as CEO of Apple, although it is claimed that he will 'continue to serve Apple with his unique insights, creativity and inspiration.' Replacing Jobs as new CEO is the company's former COO, Tim Cook.

3 3D YouTube

Not content with tying up all DreamWorks 3D Blu-rays in long-running exclusivity deals, Samsung recently announced that it has now signed a deal with VOD giant YouTube to make the service's first stereoscopic streaming service available exclusively as an app on its Smart TV platform.

4 RF tech for 3D spex

Panasonic, Samsung, Sony and XpanD have announced plans to collaborate on the development of a technology standard for full HD consumer 3D active glasses. The companies will work together on the development and licensing of radio frequency (RF) 3D glasses tech, including RF system protocols between consumer 3D active glasses and 3D displays such as televisions, PCs, projectors and cinemas.

5 Panny holds 3D torch

To the surprise of nobody at all, Panasonic has inked a partnership with the IOC (International Olympic Committee) and OBS (Olympic Broadcasting Service) for live 3D broadcasts of the London 2012 Olympic Games. The 3D content will apparently include the opening and closing ceremonies, athletics, gymnastics, diving and swimming [illegible] sadly [illegible]

6 Philips speedy as ever

Despite the announcement earlier this year that it was planning to offload its ailing TV division to Chinese monitor manufacturer ATV, Philips is still pushing back TV tech boundaries. The company claims its forthcoming 9600 series are the fastest LED TVs on the planet, with refresh rates of 1200Hz!

7 Focal's merger

High-end audio brands Focal and Naim have announced a merger. Focal & Co will continue to manage Focal and Naim as independent brands, retaining their product ranges, and will employ 325 people at its facilities in Saint-Etienne, France, and Salisbury, UK. The merger will result in a combined turnover in excess of £48million.

8 On-demand delivery

TVonics is expanding its DVR offering with downloadable internet services for software and feature updates. The free updates (available from www.tvonics.com) mean that owners of the DTR-HD500 and DTR-Z500HD can now access on-demand services including BBC iPlayer, and will be able to receive future software and feature updates via the net.

9 Whoops!

A couple of gremlins got into the last issue and infested the websites on the reviews of the Lenco SB-100 soundbar and iXtreamer media player. The correct websites for the two companies are www.lencouk.com and www.xtreamer.ie respectively.

10 Foreign and indie

Sony is going all highbrow following a deal that adds Mubi to the company's Bravia Internet Video platform. The film streaming service charges a monthly flat rate for unlimited access to its library of more than 4,500 films – but Sony's customers can now enjoy a free 30-day trial period.



The superb Japanese thriller *Confessions* is just one of the world cinema gems currently available on Mubi

Premiere

HCC's guide to what's happening in the world of TV and films...

Keep on running



Ridley Scott is about to revisit another of his old cinematic stomping grounds, when he finishes playing around in the *Alien* universe for his forthcoming sci-fi flick *Prometheus*. The filmmaker recently signed on to produce and direct a new *Blade Runner* film – although at this point there's been no word on whether it'll be a prequel, sequel, or something else altogether.

No, Joe!

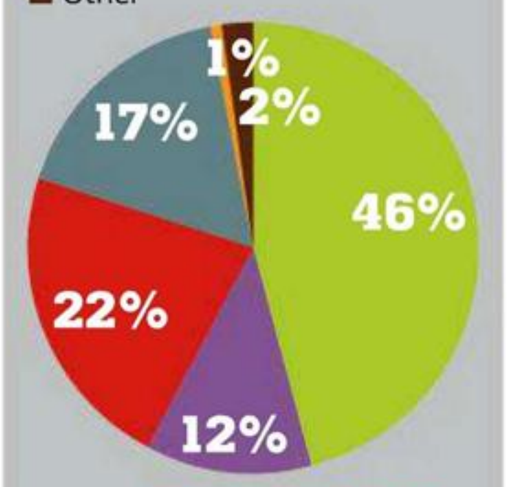
Bruce Willis and Walton Goggins have joined Dwayne 'The Rock' Johnson in beefing up the cast of *G.I. Joe 2: Retaliation*. It's worth remembering, though, that the film is being directed by Jon Chu, whose previous crimes against cinema include *Step Up 3D* and *Justin Bieber: Never Say Never*.

Budget buster

Disney has dropped Gore Verbinski's *The Lone Ranger*, after the budget ballooned to more than $200m. The film would have seen Johnny Depp's Tonto lead in a story involving Native American werewolves.

We asked...

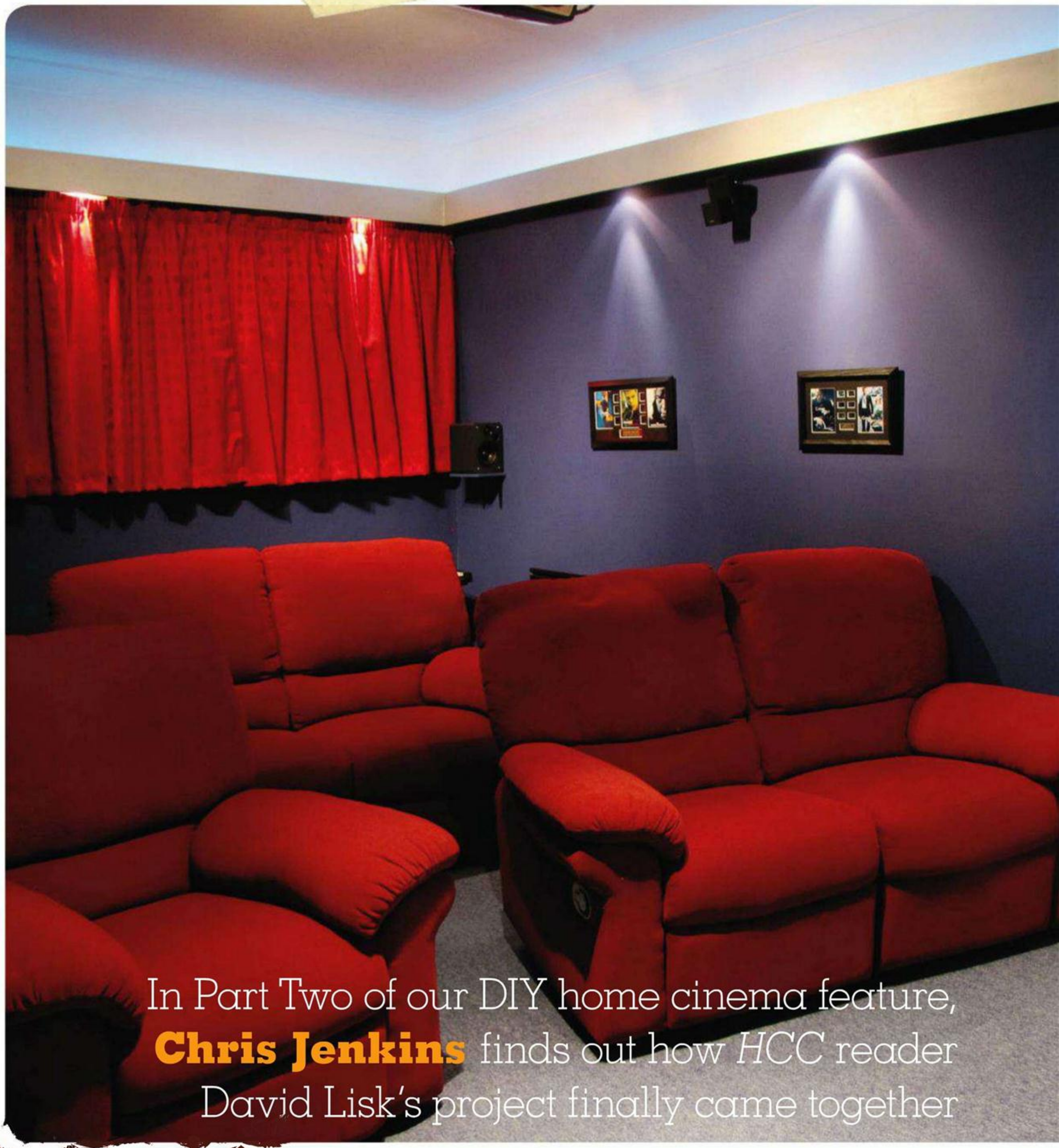
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Creating your

Part 2



In Part Two of our DIY home cinema feature, **Chris Jenkins** finds out how *HCC* reader David Lisk's project finally came together

own cinema



David's furniture choice was designed for comfort



In the last issue, we looked at how David Lisk's DIY home cinema project started with a disused garage and developed into a superb room for family entertainment. Now we'll consider some of the complexities of the cabling and the AV hardware, and take a look at the final results.

The amount of cabling involved is eye-opening, with around 70 metres of speaker cabling required to finish the project. David also used 30 metres of mains power socket circuit cable, 25 metres of mains lighting circuit cable, 20 metres of RJ45 Cat5e and 20 metres of HDMI V1.3 cable.

'The house is already served by a custom-built dedicated server along with wired and wireless networking,' explains David. 'It was a straightforward task to run a new RJ45 cable from the adjacent server/studio room to a powered hub in the cinema feeding the computer, Blu-ray players and PlayStation.'

As befits any dedicated cinema room, all the cables are concealed, in this case in the timber framed walls or in the lighting rail, which runs around the room. The cables were installed as the walls were constructed.

'To minimise potential problems all cables in the room were carefully labelled as they were installed, and when the day finally arrived when the last connections were made and the equipment was ready for testing, everything worked as it should – with the exception of the surround back speakers that were not outputting sound. I discovered I needed to enable these in the AV receiver's settings menu. This done, everything then worked correctly.

'The auto-calibrate feature on the AV receiver was used for the initial setup, followed by some minor manual tweaking to achieve the best sound performance.'

True hybrid

When it came to speccing the hardware, David shopped around, grabbed some bargains and >



Junction boxes were fabricated behind the timber-framed walls...



...and to minimise confusion, cables were labelled as they were installed



David thinks his Rathbone LEC-302 Star Ceiling adds a true cinema feel

made use of some of his existing kit. Subsequently his setup features many different brands and ranges from high-end to entry-level.

'The Pioneer BDP-LX70A Blu-ray player is a high-quality disc spinner, which I was able to obtain at a bargain price,' says David. 'The Sony STR-DA2400ES 7.1 multi-channel receiver is a great-value and good-quality receiver with the advantage of having 7.1 output and lots of inputs. The Pioneer XC-L7 2.1 amplifier I already owned, and pressed into use to add a further two height channels and sub.

'The Sony PlayStation 3 is a must for games on the large screen with surround sound. The Maidstone MD-BR-2102 Blu-ray player is a backup that has the added bonus of USB support.'

As for the audio, David sourced a pair Bose Acoustimass Dual Cube speakers to partner with the Q Acoustics 1000i Series 5.1 package. 'They suited my requirement for small unobtrusive speakers and fit under the lighting rail to incorporate into the 7.1 system. The Q Acoustics set was ideal for recessing into the walls.

'The Technic HD-198 is a low-cost projector bought initially for use with a PlayStation,



Cabling for the on-wall Bose Acoustimass speakers was let th[illegible]

and put into service in order to get the project up and tested. As it turns out, the picture is surprisingly good for the budget price. However, this is soon to be upgraded.'

There are more sources in David's system other than the trio of Blu-ray players. A Dell OptiPlex 320 PC connects to the main server and gives access to the internet for BBC iPlayer and YouTube, as well as gaming, while a Wharfedale LPDV-832 HDMI Freeview player provides broadcast TV. But, David says, he's planning to route a Sky HD feed into the room soon.

He also has a Silvercrest SL 65/12 satellite receiver for snaffling programming from abroad. Other accessories include a CentreCOM MR415T 4-port micro hub/repeater to connect the server to the computer, Blu-ray players and PlayStation3, and a SoundLab G105D 4-Channel Micro Mixer, to mix additional sound sources.

An Ebode Powermid XL ST-10 Radio Wireless IR transmitter and receiver allow the IR signals to be transmitted to equipment such as the Freeview box, which is located outside the cinema room.

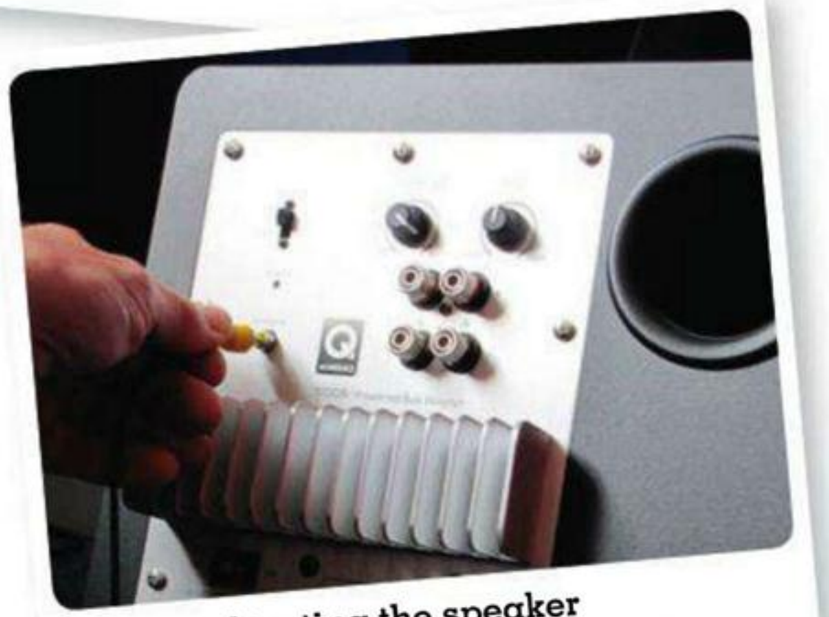
'The main problems encountered getting it all to work together were having seven remote controls!' admits David. Step forward a Harmony 1000 remote. 'It did take a bit of time to set up and customise to my preferred layout and settings, but once done, one touch switches on the required equipment for the activity selected, eg. Watch a Movie.

'It then transmits the set-up information to each device, setting the projector to HDMI, AV receiver to BD and other devices to off. Handy!'

Together with a Primeview EM82MW 16:9 motorised screen, Rathbone LEC-302 Star Ceiling



Even the room's 13 amp power sockets were hidden from view



Power and testing the speaker system was a crucial moment – and aided by his AVR's autoEQ

Kit rack...



The electronics that make David's cinema room tick

Pioneer: BDP-LX70A Blu-ray player
Pioneer: XC-L7 amplifier
Sony: STR-DA2400ES 7.1 AVR
Sony: PlayStation 3
Bose: Acoustimass Dual Cube speakers
Q Acoustics: 1000i series speakers
Technic: HD-198 projector
Primeview: EM82MW motorised 16:9 screen
Dell: OptiPlex 320 PC
Silvercrest: SL 65/12 satellite receiver
Silvercrest: Wireless keyboard and mouse
HomeEasy: 8x circuit dimming modules, HE-100 remote (pictured above)
Logitech: Harmony 1000 Universal remote
Rathbone: LEC-302 Star Ceiling light engine

Light Engine and selected furniture from Harvey's and Ikea, David's ideal home cinema was all done.

Cost effective

When he started the build, David's budget was between £4,000 and £5,000. Did he make it last? Well, almost.

'I reckon I spent £3,270 to construct the room, including the stud walls, lighting/remote controls, carpets, doors, skirting, architrave, plastering, furniture, electrics, star ceiling, seating, screen, projector bracket and furniture. I spent £1,830 on the equipment listed, so my current total spend is just over budget.

'To meet the budget, I used eBay and discount stores extensively. For example, the Pioneer BDP LX70A, which was very expensive when it came out, cost me £150 on eBay, along with a Harmony 1000 remote for £110. The Sony AV Receiver was purchased new over the internet for £250, and the Q Acoustics speakers, again new, for £300.'

Of course, says David, replacing the inexpensive projector with a better model could add up to £1,500 to the final cost. But even then he will have only spent £6,600 – and a lot of his spare time – designing and constructing a home cinema room that any of us would be proud of. All that's left to do now is to sit back and enjoy it!



Concealed lighting rails around the walls provide low-light illumination for [illegible] room

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Bringing 3D home

The next-gen video format is made for rooms like this, says **Mark Craven**

For serious AV-holics a 40in 3DTV just won't do. The best way (some would say the only way) to watch Full HD 3D Blu-rays is on a projector screen. This is certainly the opinion of the owner of this dedicated movie room, which flaunts JVC's flagship X9 PJ for full-size 3D thrills.

The installation was undertaken by the Leeds office of *HCC* award-winners Finite Solutions, as part of a complete overhaul of a derelict farmhouse, with the proposed design mocked up as a 3D render so the owner could be sure he was getting what he wanted.

As well as 3D, other requests included child-friendly operation, *Tron*-inspired decor and, of course, top-quality AV performance.

For the latter, Finite worked with some of the owner's existing hardware (a KEF subwoofer, Stewart projector screen and Integra pre/power combo) to build a 7.1-channel cinema system. New kit includes an 8TB Kaleidescape server/player, B&W speakers, Arcam BPD-100 Blu-ray deck, a PS3 (handling 3D duties until the Arcam's 3D update arrives) and a pair of Sky+HD boxes. The Kaleidescape system includes the brand's Child Remote, meaning the room can be used without parental supervision – the system automatically restricts the choice of content when the Child Remote is used.

Sound improvement

Acoustically, the build benefitted from the room being an empty shell. This allowed Finite to line it with acoustically-absorbent plaster board and silicone isolators, preventing sound transferring to the rest of the house.

Raised tiers for the Signature cinema seats, plus carpeting and lighting, were also laid early on. The carpet and lighting contribute toward the subtle *Tron* theme in the room (although we feel a replica Lightcycle would have been a good finishing touch).

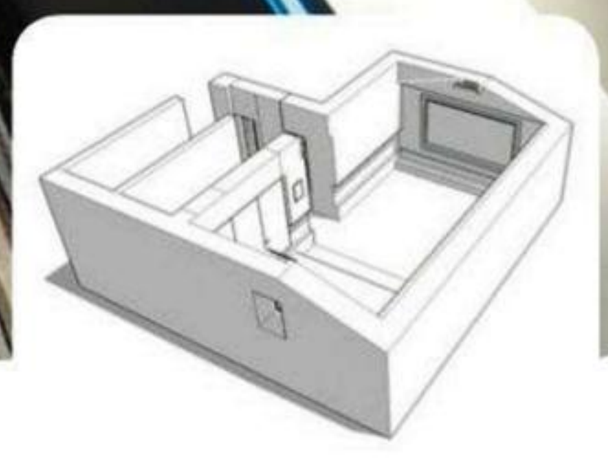
A Crestron TMPC-8X touchscreen controller takes the stress out of operating the cinema, from watching a movie to choosing the lighting. It's also integrated with the home's CCTV and gating system.

So, reference-grade projector, thousands of movies at the touch of button, intelligent lighting and 7.1 surround sound – if the future of home cinema is 3D, then this is the way to do it...

→ Kit Checklist

JVC: X-9B projector
Stewart: 8.5ft screen with Studio Tek Micro perf fabric and automated screen borders to switch to 4:3 format
Integra: Processor and power amplifier
DVDO: iSCAN video scaler
B&W: 3 x Signature 8 NT LCR three-way speakers; 4 x CWM 7.5 surround two-way speakers
KEF: 500W subwoofer
Kaleidescape: M500 player; 1U Kserver with 8TB of storage; Kvault-10
Arcam: BDP-100 Blu-ray player
Sony: PlayStation 3
Sky: 2 x Sky+HD
Crestron: TMPC-8X; AV2; 2 x CP2E
Niko: Lighting control
Signature cinema seating
Middle Atlantic rack and cooling

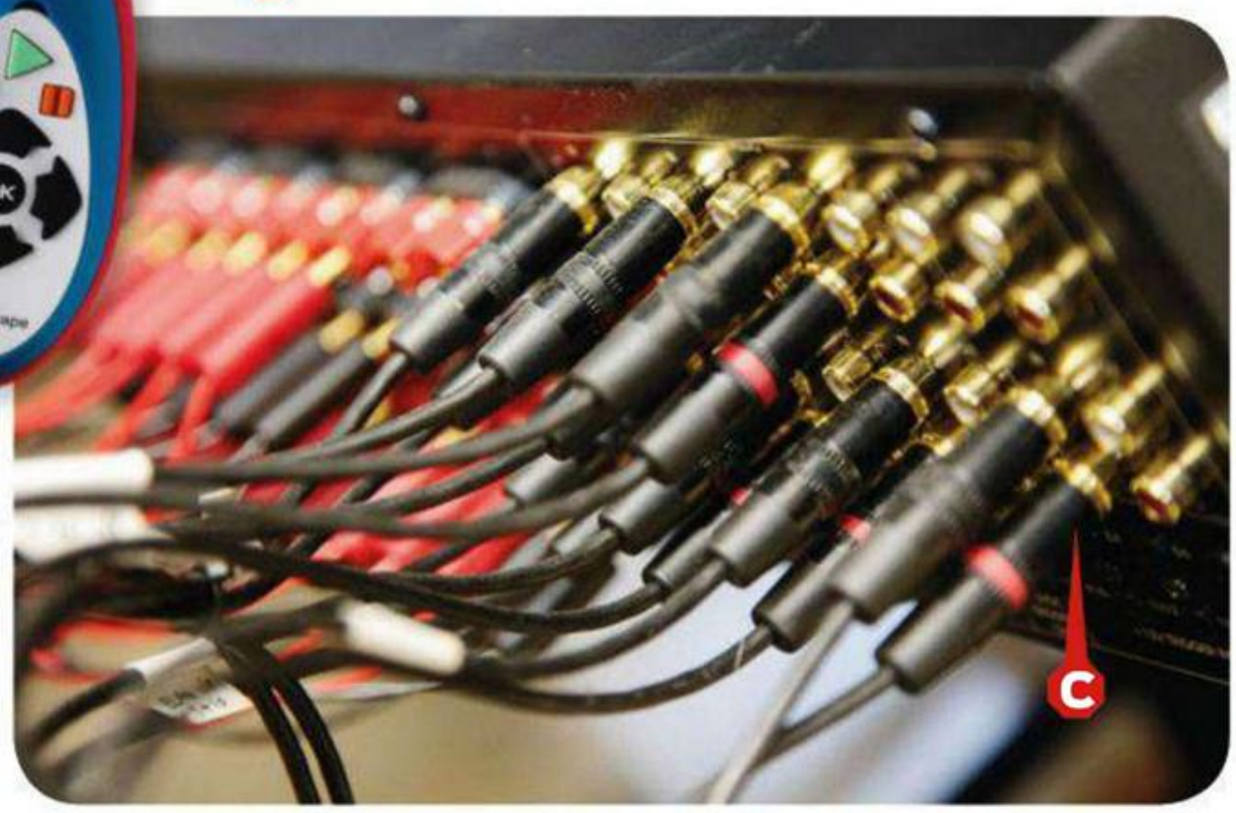




3D renders helped the owner know exactly what the finished room would look like







Room essentials

A Nice rack
The sheer number of components housed here meant a bespoke ventilation system was designed to ensure nothing overheated

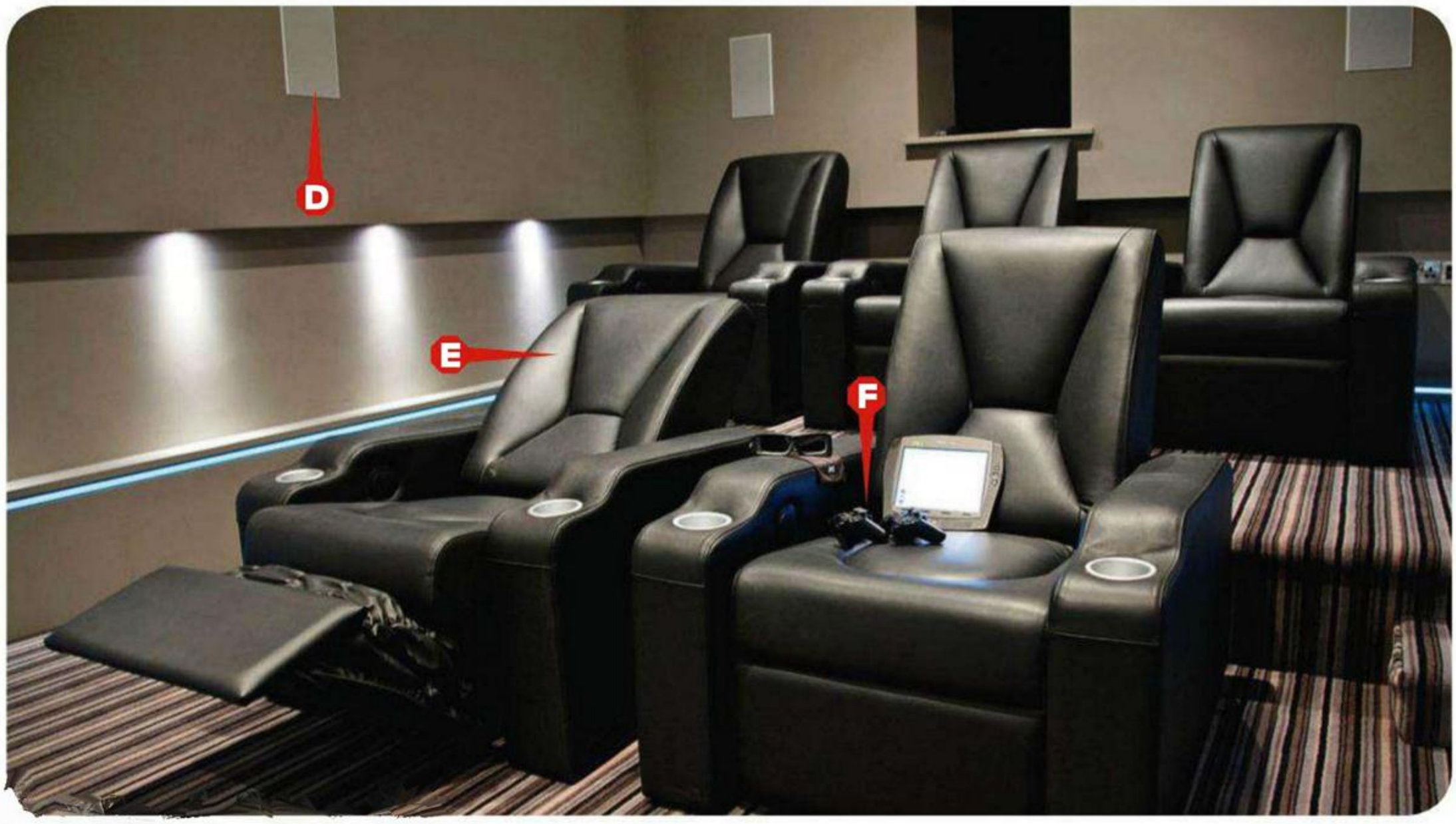
B Child's play
With youngsters eager to use the room, Kaleidescape's Child Remote is employed to make sure they can operate the system – and not end up watching *Scarface*

C Cable crazy
It's safe to say the wiring job wasn't done in a couple of minutes – and each cable is labelled to make future upgrades easier

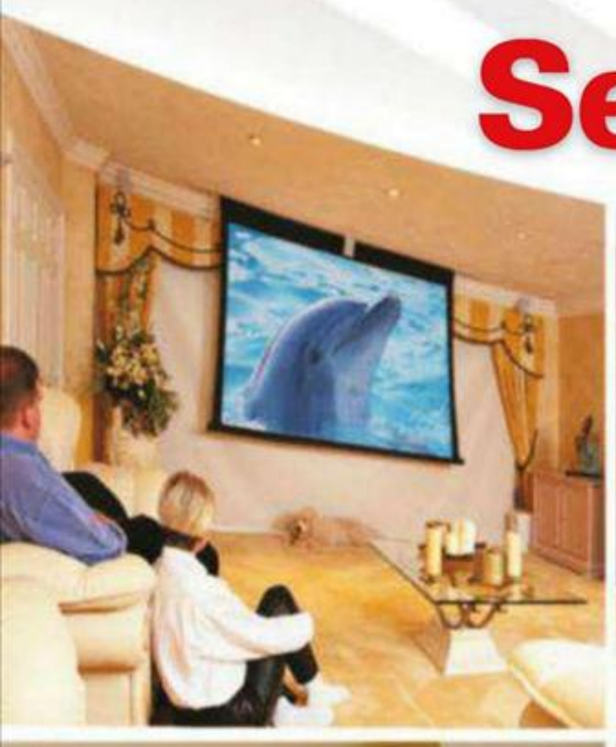
D Wall of sound
The 7.2-channel system uses Bowers & Wilkins in-wall speakers to maintain the room's sleek design, while the front soundstage is mounted behind the projector screen

E Five-star seating
This quintet of reclining cinema chairs from Signature makes movie-viewing a comfortable experience for the whole family

F Game on
These PlayStation controllers are on hand for bigscreen gaming sessions – and 3D movies until the Arcam BDP100 gets its 3D update



Serious Home Cinema










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About the AirTies Air 4420-TV

AirTies' Air 4420-TV is a revolutionary product which uses the latest in wireless tech to deliver flawless HD streaming around your network and connection to your TV's internet services at speeds of up to 300Mbps.

Featuring Auto Channel Selection and buffering technology to ensure a quality of media streaming not seen in competitive devices, the 4420-TV combines ease of set-up via its Airtouch one touch set-up with the ability to stream up to three HD video files at the

Setup is a simple three-step process: just connect one of the 4420-TVs to your existing router/gateway, connect the second to your 'net-enabled device, and push the buttons on both devices so they pair securely and automatically using WPA2 security protocol.

The 4420-TV has a host of other features which will enhance your connected home network. Transmitting selectively on either 2.4 or 5Ghz, not only can you stream HD video but you will benefit from improved performance on your wireless network – and further units can be added to the system at a touch of the button via the Mesh technology functionality.

The 4420TV features a DNLA compliant media server to assist in streaming downloaded content and has uPnP product support to ensure compatibility with a wide range of devices as well as your 'net TV, including Xbox 360, PlayStation 3, Smart Blu-ray decks/set-top boxes and media players.

Each device even has a USB port which can act as a wireless print server for any USB connected printer or be used to connect any USB hard drive to share files.



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BD BEHEMOTH

The *Star Wars Saga* is available now in a choice of three Blu-ray boxsets – the nine-disc *Star Wars: The Complete Saga* (reviewed p30), plus three-disc *Prequel Trilogy* and *Original Trilogy* sets

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The sound of *Star Wars*

With the sci-fi saga now out on Blu-ray, **Anton van Beek** talks to sound editor, Matthew Wood, about remastering the series' signature sonics

The screech of a TIE Fighter as it flies across the surface of the Death Star. The electrical hum of a lightsaber. Darth Vader's mechanical breathing. These are the sounds of *Star Wars* that have reverberated around home cinemas across the world for decades. And with the *Star Wars Saga* finally making the leap to the ultimate home entertainment format, we caught up with the man charged with remixing these legendary soundtracks for Blu-ray, Skywalker Sound supervising sound editor, Matthew Wood.

Anton van Beek: Can you tell us about your involvement with the *Star Wars* Blu-ray?
Matthew Wood: I was the supervising sound editor on the theatrical release of *Episodes I*, *II* and *III*, which I worked on with [legendary sound designer] Ben Burtt. I've also been involved in the restoration of *Episodes IV*, *V* and *VI* ever since about 1997 when they did the Special Editions. Now we have the Blu-ray release, which will be the first time that the masters of our audio have been heard in a lossless format.
AvB: As I understand it there were three mixes originally created for *Star Wars* in 1977: mono, Dolby Stereo and six-track 70mm.
MW: Correct.
AvB: So I was wondering which, if any, did you go back to for the basis of the Blu-ray release? Was it a case of cherry-picking the best elements from each?
MW: The majority of people probably heard the film in mono back in the '70s and – I was only about five when it came out – but I'm sure that was the version I heard... Not that I can remember that far back.

But I know that when we made the Special Edition in 1997 we tried to cherry-pick the [illegible]



Hidden talent: Wood also provided several creature voices for *Episodes I–III*

problem we had then was that that was all we had – the masters. We just had the mono, the stereo and I think it was like an L/C/R/S, a four-track master, for the 70mm. We didn't have discrete stems for anything. So all we could do was lay stuff on top of what was already created. Because of this, we'd have to make gross EQ adjustments to the entire mix whenever we wanted to do anything and that was a big limitation. I always thought that the '97 mix was a little brittle and a bit harsh.

I had the Betamax as a kid and the LaserDisc that came out in '91, so I'm very familiar with all of the previous mixes. And I just wanted to make sure that everything performance-wise was included in the updated version. We've been working on *A New Hope* since 2003/04 for the DVD release and then, once again, **we started working on the Blu-ray version in about 2007**. So it's been a long process of getting that together and having the mix balanced correctly and working alongside George Lucas and Ben Burtt to make that happen.
AvB: How important is the audio to the success of a movie like *Star Wars*?
MW: I think it's a big part of it. They even created, back when the original *Star Wars* was made, a special Oscar, an Academy Award for Ben Burtt because of the work he did on that film. It was like a special sound effects award that was made just for him. And the company I work for, the Skywalker Sound division of Lucasfilm, was created to make the *Star Wars* movies, although we've had success beyond that, working with other directors. So for those of us working at Skywalker Sound, the *Star Wars* movies are like our crown jewels. We really want to make sure that they are released with the utmost care on Blu-ray. We've taken a lot of care with these masters.
AvB: How do you balance being sympathetic to the original soundtracks when doing new surround remixes?
MW: It's hard. That's one of the main challenges. The big thing George [Lucas] told us was that he wanted all the films to kind of sound cohesive. So that anybody who puts them in, even someone who hasn't even seen them before, can watch them

FACT! The *Star Wars Saga* is Amazon UK's biggest pre-ordered Blu-ray of 2011

and feel it's similar across all six films. Or at least in groups of three – the original trilogy and the prequel trilogy.

A New Hope definitely took the most TLC to make that happen, because when it was made they really didn't know it was going to be under the microscope that all the other films subsequent to that would be under. And the masters, the original mixes, were done in Los Angeles and were done during a night shift – it was a totally different time as to how you made mixes back then. They were almost a performance. You'd have to go from the start of the reel all the way to the end and remember all of your EQ and fader moves and everything you're doing all as a performance. Today, obviously, you can do it all non-linearly. Your automation is saved on a computer, so you can really craft scenes right down to the last second.

Anyway, we just really wanted to make sure that the balance was the same, that the dialogue can be heard, that John Williams' music is going to be heard the way people remember it.

But you also want to be able to extended frequencies into the subwoofer. Take the opening scene, where you've got the Star Destroyer fighting the Blockade Runner. People want to feel that come from overhead and you want to feel the subwoofer extend. But none of that is there in the original mono mix. You really have to build all of that. It's like giving people what they think they remember hearing in 1977, but doing it in 2011 with a Blu-ray. And also making it sound comparable to the other five movies. We went through those reels hundreds of times in order to get approval from both Ben and George on that.



FACT! The Blu-rays do not include the original edits of Episodes IV-VI. Sorry!

AvB: How hands-on has George been with the approval process for the Blu-rays?

MW: Well, my main task before George became involved was that I just wanted to make sure that it played right. I'm talking *A New Hope* now, because that's the one that had the most work done on it. I had all the material that was used in the original mix. So I had to pretty much rebuild that movie from scratch, getting all of the original production takes, getting all of the sound effects out of Ben Burtt's library and all of the music takes from the John Williams library, and re-cut that to the picture and make sure that it's all correct. That was a huge task. It took a really long time going over the film in 15 second chunks, just listening to it.

Once I got that all in place I had George come in and listen to the reel and we mixed it again against what we had. We used the Special Edition as the starting point, because that was the last time George had listened to it and approved the mix. So we kind of built it up from there. And occasionally I would go back and listen to the VHS and the mono mix just to see how far out we were or not. So, he was definitely hands-on for the playbacks we did for him.

AvB: Finally, what would you choose as the definitive *Star Wars* Blu-ray audio demo?

MW: Good question. I'll pick one from *IV*, *V* and *VI* and one from *I*, *II* and *III*, if that's okay!

From the prequel trilogy my favourite is definitely the Pod race in *The Phantom Menace*. I think it showcases great sound effects work and sound design. And it really has aggressive subwoofer and surround usage with all the different motors we created for those scenes. And then there's John Williams' music, which comes in just at the right moment.

My favourite moment from *IV*, *V* and *VI* is anything with the Carbon Freezing Chamber in *The Empire Strikes Back*. Anything they do with the Carbon Freezing Chamber, when they've got Han in there or the lightsaber fight with Luke and Vader. The ambience in the background, Darth Vader's breathing and just the way the lightsaber fight goes and the intensity of that scene. I think the audio matches the visuals really well and builds a great environment to listen to.

TURN FOR MORE: OUR IN-DEPTH NINE-DISC BOX SET REVIEW

Star Wars Blu-ray – behind the scenes

Marc Chacksfield visits San Francisco to speak to SFX supremo Dennis Muren about his time on Star Wars

When you visit Lucasfilm's headquarters in San Francisco, there's simply no getting round the fact you have entered the world of *Star Wars*. A statue of Yoda overlooks the Letterman Digital Arts Centre in San Francisco's Presidio, and the inside of the building is a shrine for *Star Wars* fanatics. Numerous models from the movies nestle next to other Lucasfilm and ILM products and on every wall hangs George Lucas' personal collection of vintage movie posters – reportedly the largest in the world.

There's even an HCC Award on display, dating back to the DVD release of the original trilogy...

Flanked by two Stormtroopers, *HCC* was given an exclusive tour of Lucasfilm for the launch of the *Star Wars* boxset, where we were shown a preview of the discs as well as sitting down to chat with Dennis Muren, eight-times Academy-award winner and the visual FX maestro for the franchise.

Cosmetically, the Blu-rays have been given a massive picture clean. The Original Trilogy has been spruced up, with picture dirt and blemishes erased. Mistakes in the movies, like seeing garbage mattes in some of the TIE fighter seque



Stormtroopers: Security at Lucasfilm's HQ dresses the part

Episode IV, have also been fixed. You can now no longer see the puppeteer's stick controlling the Wampa's arm in E*mpire Strikes Back* and we are pleased to note that the Lightsabers have their white-hot cores back. Also, the Emperor's 'slugs' have been removed from his face. In short: those behind the Blu-ray release have been listening to the fans and taking notes.

For Muren, these fixes are righting a lot of wrongs that he wished they had fixed in the original production of *Star Wars* but simply ran out of time.

'When it comes to the stuff I worked on you can see some of the fakeness, but I don't really have a problem with that,' explained Muren.

'When George was doing some re-dos on the original *Star Wars*, though, I was all in favour for that as we had run out of time anyway. I wanted to re-do around 30 to 40 shots. If it means getting rid of garbage mattes I think it is okay, as that really messed up the original VHS of *Star Wars*.

'When they came out everybody thought that was how it looked in the cinema but it wasn't. That was because the transfer wasn't done quite right.

'I am all for changing things to get it back to how it looked originally in the cinema.'

As for the movies now released on Blu-ray, Muren believes that as long as the appetite is there for the films, then they should be re-released on whichever format is *en vogue* at the time – and that includes 3D.

'The only reason 3D [versions of the movies] are coming out is because it is the future. If there is a way in the future to do the hologram version and the fans want it then it should be done.

'But you don't just want to stop making movies and keep releasing old ones. These [re-releases] should be seen as a supplementary thing.'

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Synchronised Lightsaber swinging went down a storm at the Naboo Olympics



Sith happens

How did The Beek know HCC got him a Star Wars boxset? He felt his presents!

Star Wars: The Complete Saga

George Lucas' space opera is arguably the defining event in modern cinema history – one that reshaped Hollywood and the films that followed in its wake. So it's hardly surprising that the *Star Wars Saga* has also become the definitive home cinema franchise.

Spanning VHS, LaserDisc and DVD (plus some other, less well-remembered, formats) the movies have become the backbone of any self-respecting film aficionados' collections over the past couple of decades. So all that remains to be seen is whether or not it's worth upgrading yet again with this bumper Blu-ray release...

Picture

As expected, this Blu-ray boxset's six AVC 2.40:1 1080p encodes are the best the Lucas' sci-fi films have ever looked – although there are still a few flaws across the sets for the nitpickers out there to latch onto.

Oddly enough *The Phantom Menace* proves to be the least visually satisfying of the encodes. Colour reproduction is absolutely resplendent and it's finally free from the edge enhancement (with halos thicker than the sparkly glow around a Jedi's ghost) that plagued the original DVD. However, while film grain and fine detailing are both present, noise reduction has resulted in a slighter softer look than the rest of the saga. As *The Phantom* [illegible] (the last shot on film, but the first to make extensive use of CG locations and characters), this may have been done in post-production to balance the different elements, and could be an issue with the source itself, rather than the Blu-ray encode.







Got bad feeling about this: Three discs of extras sounds great – but does this boxset get the balance right?

Attack of the Clones and *Revenge of the Sith* have no such problems. Shot entirely digitally, they both boast astonishing clarity, vibrancy and detail (just check out the colour reproduction and detail in the grassy field during Anakin and Padmé's picnic in Chapter of 21 *AotC,* or the fine textures in the Wookiee fur in Chapter 17 of *RotS,* to see what I mean).

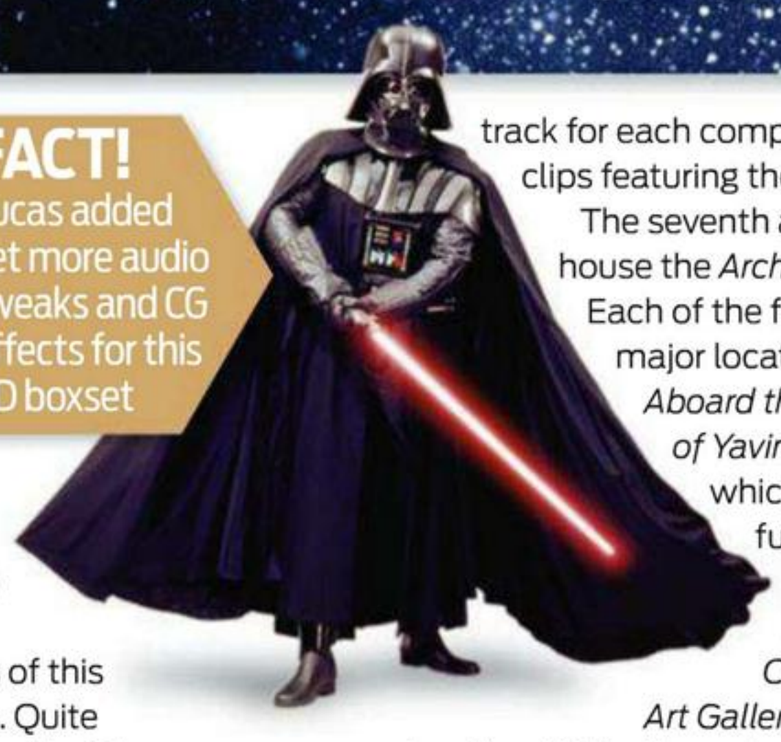
A New Hope is slightly more problematic – thanks to a slightly digital look to the grain and some obvious colour-boosting (albeit not as excessive as on the original DVD release). But these are ultimately small complaints compared to the overall jump in clarity and detailing that this hi-def release brings with it. The latter point can also be applied to *The Empire Strikes Back* and *Return of the Jedi*, both of which receive beautifully film-like 1080p transfers with well-maintained grain structure, excellent detailing and breathtaking clarity that really allows you to appreciate the films' intricate model work and creature designs. Again, neither is completely perfect: colour-boosting rears its head in *Empire*'s Carbon Freezing Chamber (Ch 42) with obvious blue tints to areas of shadow, while the last few shots on board the shuttle *Tydirium* in *Jedi* (Ch 19) are noticeably

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softer than the rest of the film (although, again, this is quite possibly a fault with the source material rather than the encode).

All of which sounds pretty negative. But in the grand scheme of things, these are minor faults, none of which can take the shine off the startling restorations of this seminal series of sci-fi flicks. Quite simply, you'll never have seen the *Star Wars Saga* looking this good in your home before.

FACT! Lucas added yet more audio tweaks and CG effects for this BD boxset



Sound

As good as the picture quality is across these six films, the newly-crafted DTS-HD Master Audio 6.1 soundtracks step things up to another level. Audio has always played a significant part in the *Star Wars* franchise (be it the sound of a swirling Lightsaber or John William's epic score), and these new mixes build upon that heritage to deliver truly epic audio.

Unsurprisingly, the Prequel Trilogy is awash with sonic thrills – be it *The Phantom Menace's* Pod race (Ch 20-22), Jango Fett's seismic bombs in *Attack of the Clones* (Ch 28) or *Revenge of the Sith's* opening battle over Coruscant (Ch 3). Each offers a staggering amount of audio information (every engine, thruster, laser blast and explosion is unique to each vehicle/weapon) all moved around the soundfield with incredible precision.

While the Original Trilogy lacks the sonic nuance of the Prequels, it more than makes up for it with raw power. The tracks are loud and proud, booming out explosive bass and dynamic surround effects that will leave a massive grin on the face of any audiophile (although your neighbours might not be quite so pleased). To misquote Han Solo, they're strong enough to blow the ears off a Gundark.

Admittedly, some of the elements in *A New Hope's* mix (particularly a few of the laser blasts) still sound a little thin, but this is a fault of the quality of the source material. It's also worth noting that the Blu-ray corrects the DVD's audio faults (such as mixed rears during the Death Star attack).

On the whole, these are extremely atmospheric and energising re-mixes that completely update the original soundtracks while still managing to feel sympathetic to the original sound design – it's a truly remarkable feat. And against all of that, across all six films, you have the added benefit of crystal-clear dialogue and the best treatment I've ever heard of the movies' brilliant scores.

Extras

This nine-disc set comes loaded with bonus features (heck, it devotes three whole discs to them), but it's still hard not to feel somewhat short-changed by what's on offer.

The only extra features accompanying the films themselves are audio commentaries – two per movie. These take the form of the original DVD c[illegible] l[illegible]mmentary track for each comprised of archival interview clips featuring the cast and crew.

The seventh and eighth discs in the set house the *Archives* – one for each trilogy. Each of the films is split up into its major locations (eg. *Tatooine, Aboard the Death Star* and *Battle of Yavin* for *A New Hope*), which in turn offer up four further areas to explore – *Interviews, Deleted/Extended Scenes, The Collection* and *Concept Art Gallery* related to that specific location. While the rest are pretty self-explanatory, *The Collection* serves up costumes, maquettes, models and matte paintings that can be viewed in detail, rotated through 360° (matte paintings offer film comparisons instead) and all come with short production videos.

The final disc is devoted to *Documentaries & Spoofs*. The former is taken care of by: three archival production documentaries – 1977's *The Making of Star Wars* (49 minutes), 1980's *The Empire Strikes Back: SPFX* (48 minutes) and 1983's *Classic Creatures: Return of the Jedi* (48 minutes); the creation of one of *A New Hope*'s CGI effects in *Anatomy of a Dewback* (26 minutes); *Star Warriors* – a look at the people who dress up as *Star Wars* characters and the work they do for charity (84 minutes); the science behind the films in *Star Wars Tech* (46 minutes); and *A Conversation with the Masters: The Empire Strikes Back 30 Years Later* (25 minutes), featuring George Lucas, director Irvin Kershner, co-writer Lawrence Kasdan and composer John Williams.

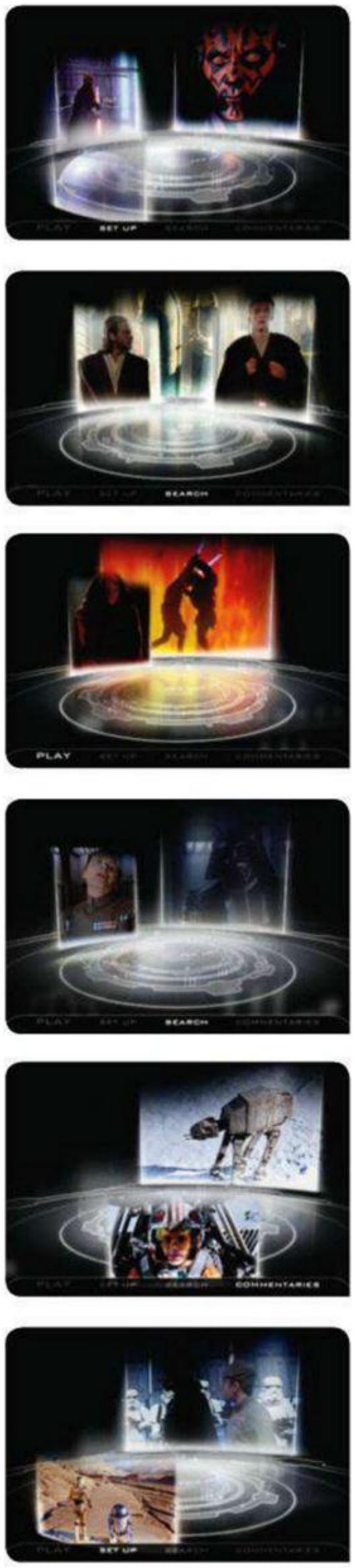
The *Spoofs* part is taken care of by a 97-minute reel of clips from *Star Wars* parodies from films (eg. *Hot Shots! Part Deux, Spaceballs*) TV shows (eg. *Family Guy, Robot Chicken, That '70s Show, Saturday Night Live*), commercials (eg. *Vauxhall, Spike TV*) and fan projects (eg. *Troops, AT-AT Day Afternoon*).

Admittedly, there is a lot to enjoy here – the commentaries are fascinating, the archival production featurettes make an extremely welcome return from the vaults and the deleted scenes from the Original Trilogy are the answer to the prayers of many old-school fans (although, to be fair, it's easy to see why they were cut – most are simply diabolical).

But there's also far too much crap. Who really wants to see a 97-minute reel of parody clips (one that doesn't even include Rachel's Slave Leia outfit from *Friends* – surely the most-viewed *Star Wars* gag in a generation)? Or a tiresome 84-minute documentary about nerds dressing up as Stormtroopers?

The most damaging decision taken during the production of the boxset was to exclude anything (bar audio commentaries) that had appeared on the previous DVDs. This means that all the excellent behind-the-scenes docs from the earlier discs are nowhere to be found. Even the Prequel Trilogy deleted scenes from the DVDs are absent here, replaced by 'new' ones. It's a ridiculous situation, which forces fans to own both the DVDs and Blu-rays in order to have all of the extras ●

Menu: The movie discs share an identical menu structure, with only the clips and music changing on each



HCC VERDICT

Star Wars: The Complete Saga → 20th Century Fox
All-region BD → £90 Approx

We say: Despite lacklustre extras, the Force is strong in this boxset

Picture: 1 2 3 4 **5**
Sound: 1 2 3 4 **5**
Extras: 1 2 **3** 4 5
Movie: 1 2 3 **4** 5

Overall: 1 2 3 **4** 5

Back TO THE

Mark Craven scours the past 200 issues of *HCC* to find the key AV events and products that have shaped our hobby

1997
Hang on the wall TV

The 27th issue of *HCC* saw John Archer (yes, him) getting in a flap over Fujitsu's PDS4201E – a 42in plasma TV with a price tag of £11,600. It didn't score particularly well, but the Fujitsu was certainly a product worth getting excited about. As the first PDP to reach the UK, it offered a glimpse at the future of AV – thin bezels (this was 'only' 150mm deep), big screen sizes and hitherto-unseen mounting capabilities. The writing was literally on the wall for CRT and rear-projection TVs – and we could all dream about having a living room like the one below.

2000
Sony PlayStation 2

When Sony launched its second-generation games console in 2000, it heralded a sea change in home entertainment. Sure, the DVD format had launched a couple of years earlier, and there were plenty of dedicated players available, but it was the PS2 console that really brought the digital discs to the mass market. The most successful gaming device of all time acted like a Trojan Horse for DVD, knocking the last nail into the LaserDisc coffin and making VHS look hopelessly old-fashioned. Six years later, the PlayStation3 would have a similar impact for Blu-ray.

2000
The birth of the PVR

It seems like a bad dream now, but when *HCC* launched we were archiving TV programmes to videotape. Then, before we got too involved with recording to DVD (which, frankly, is a pain), PVRs came along – first in the form of TiVo in 2000, and then Sky+ in 2001. Their previously unimaginable trickplay features had instant appeal, watch 'n' wipe became the norm, and stand-up comedians could no longer make jokes about how hard it was to get their VCR to record something. And even though streaming content direct from the cloud is beginning to gain traction, we can't see people dumping their PVRs just yet.







future

2002
The Digital revolution

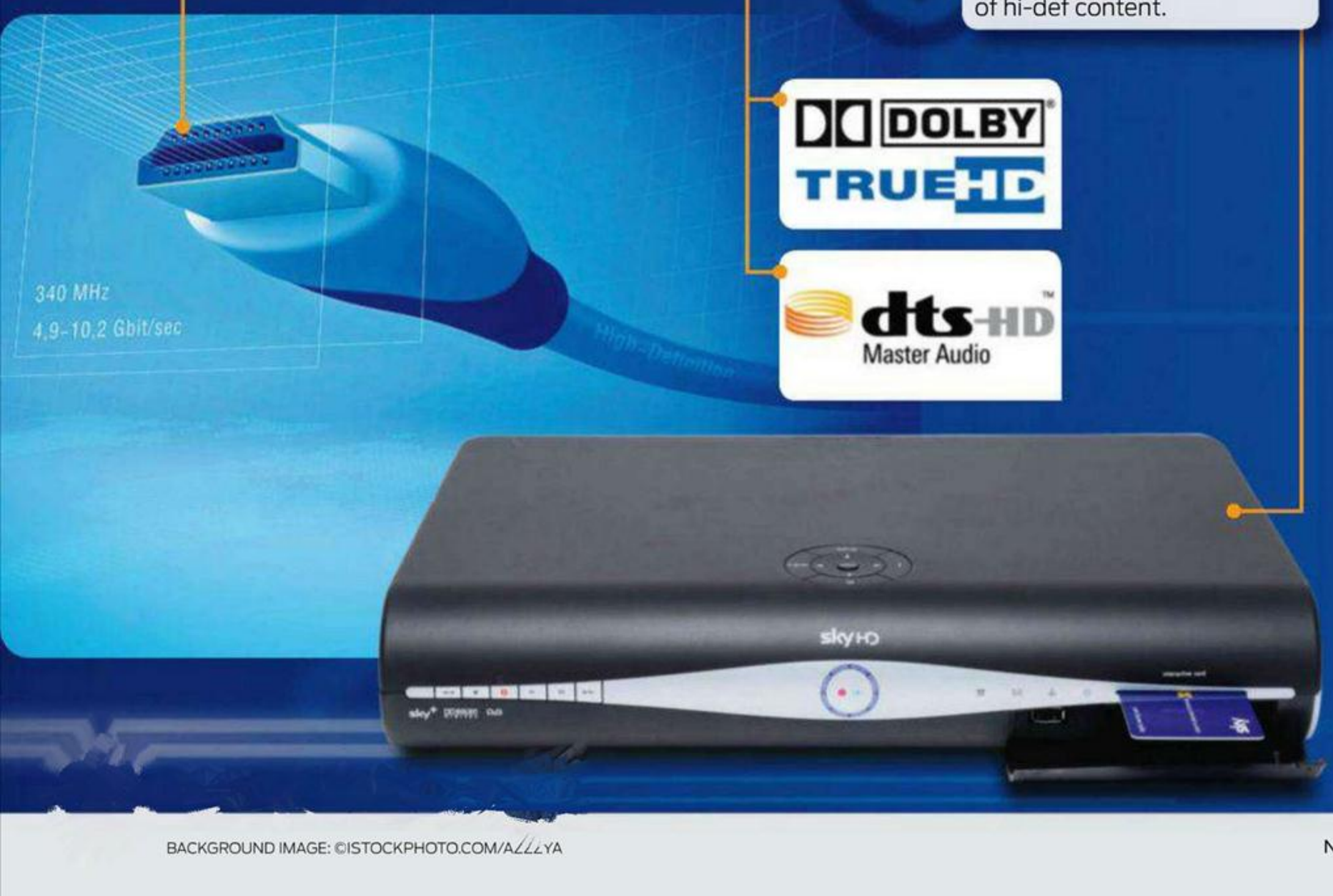
We've heard HDMI described by a custom installer as 'the Devil's invention', but its impact on our AV hobby cannot be overestimated. The establishment of a standard digital video and audio interface in 2002 is an example of how, sometimes, the consumer electronics industry can work together and get something right. By making it so easy to connect two devices, home cinema heaven immediately became more attainable for technophobes.

2006
Lossless audio arrives

When they finally launched in 2006, Blu-ray and HD DVD made headlines for their hi-def visuals, but the introduction of lossless audio went largely unheralded. This was a shame, as the leap in quality offered by Dolby TrueHD and DTS-HD Master Audio over their lossy counterparts was huge. It was also what audiophiles were crying out for, at a time of MP3 player domination and lacklustre SACD and DVD-Audio support. Now in 2011, we're getting the 7.1 mixes the codecs always promised.

2006
Sky HD

With HD Ready TVs clogging up retailers' shelves, it was a relief in the spring of 2006 when Sky, in typically innovative fashion, launched a service that actually offered regular HD programming. For many people, the MPEG-4-delivered 1080i images on the nine debut channels were their first taste of hi-def, and such was the demand for the new satellite receiver that three month waiting lists weren't uncommon. Freeview, Freesat, Virgin and BT Vision all followed, but Sky HD was, and continues to be, the king of hi-def content.



200 up

HCC founder Steve May casts his mind back to issue one...



In just 200 issues of *Home Cinema Choice*, home cinema has evolved beyond all recognition. Today we talk blithely about lossless audio and digital lockers, but how many of today's AV enthusiasts would know what to do with an S-VHS VCR and a Pro-logic surround sound decoder?

What we now enjoy would have seemed like science-fiction to the team working on that first issue.

HCC's first ever group test back in 1995 was of 28in Pro-Logic TVs. Yes, twenty-eight inches. Almost inconceivably, that was the going size for a living room telly back in the day. And each of these beauties had a simple surround sound decoder built in. The sets shipped with a pair of small plastic speakers to pop at the back of the room. If you wanted a larger screen size, the choice was minuscule. I can still remember the excitement when a 36in Mitsubishi TV turned up in the office. Home cinema heaven indeed!



Sixteen years ago, if you collected movies on disc, they would come in the shape of 12in LaserDiscs. LDs were our tipple of choice. Often lavishly packaged and extremely expensive, LaserDiscs represented the pinnacle of AV excellence. Some even came with Dolby Digital 5.1!

But of course, one thing hasn't changed over 200 issues of *HCC*: our passion for movies. We still covet and collect them, and we still buy the best equipment we can afford to recreate the theatrical experience at home.

So the more things change, the more they stay the same.

BACKGROUND IMAGE: ©ISTOCKPHOTO.COM/AZZZYA

2007
Pioneer Kuro

In the last 16 years, no other product range has garnered as much AV love as Pioneer's Kuro plasmas. These high-performance PDPs set a picture quality benchmark that some argue has yet to be beaten. Kuro, in Japanese, means 'black', and black was what these sets delivered in spades. What's often forgotten is that the first-gen 42in and 50in models of late 2007 didn't have 1,920 x 1,080 resolution – it was the second, and final, full HD lineup that achieved true reference status. Yes, they cost a lot of money, but quality often does.

2008
The death of HD DVD

January 4, 2008, was a great day for home cinema enthusiasts, with Warner Bros announcing it was pulling the plug on HD DVD. Toshiba shortly gave up the ghost on its Blu-ray rival. At the time, it didn't seem such fabulous news – HD DVD hardware had impressed by coming to market fully-formed (none of Blu-ray's Profile 1.0 nonsense) and features such as Universal's U-Control and Warner's In-Movie Experience had shown the potential of the format. But looking back, it's obvious that two hi-def platforms was one too many. The best may not have won, but we're glad the war ended so quickly.

2009
TVs get Smart

Our first look at Smart TV was at CES 2008, but we had to wait until spring 2009 to get our mitts on what was known then as a 'Widget TV'. Unsurprisingly, the first fledgling Smart TV out of the Far East came from Samsung, whose LE40650 featured a Content Library with pre-installed games, recipes, children's stories, etc and offered online access to Yahoo Widgets, YouTube and Flickr. 'We can see this becoming a major feature of all TVs in the near future,' predicted *HCC*. And for once, we were spot on.

2009
Avatar

Movie maestro James Cameron almost disappeared from view after *Titanic*, save a few underwater documentaries and his TV series, *Dark Angel*. But when he came back in 2009 with *Avatar* all was forgiven. This box-office-breaking sci-fi flick has been a shot in the arm for the Blu-ray format, become a go-to demo disc and, whether you like it or not, ushered in a new era of 3D video. Film critics can argue about its artistic merits until they are Na'vi blue in the face but – if you don't own this disc, you don't love home cinema.

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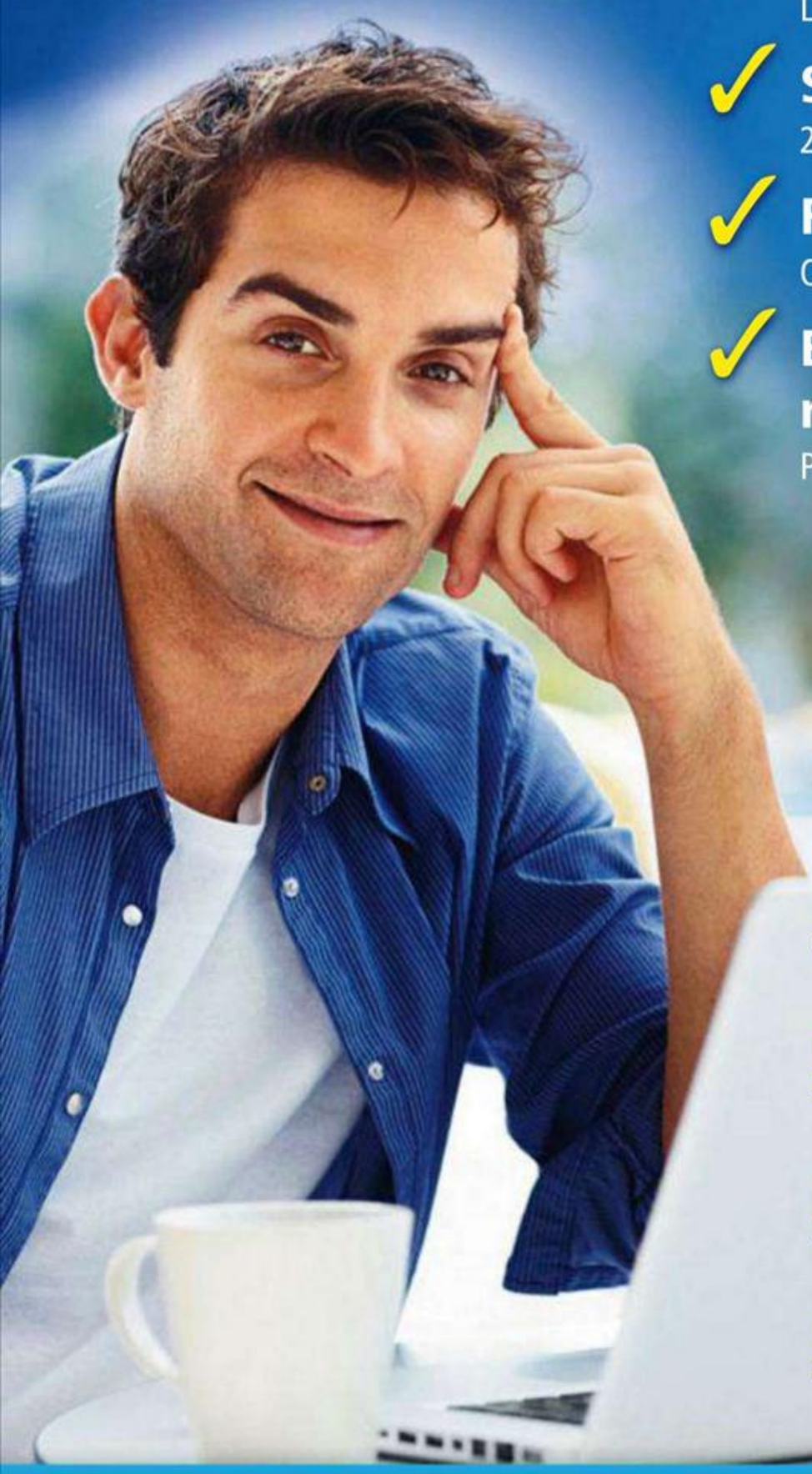
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Reflect on this

I have a Viewsonic 8200 projector (with the very latest firmware, so it's possibly better in performance than the one you tested). However, in a totally blacked-out room I can see a 'ghost'/halo light image appearing outside the main projected area. This constant bright stray light is quite distracting. I have found that with careful use of a 'screen' (in the form of the underside of a mouse-mat), I can block off most of it, but I need to have such a screen on all four corners of the image.

Does anyone make something like those 'shutters' you see on film studio lights, that create a hard cut-off? I'm thinking of something that bolts to the ceiling, with four paddles that could be adjusted to kill stray light.

I'm sure I shouldn't have this issue, but I'm very aware that most people wouldn't spot it, so it might not be well reported.

The way to notice it is by looking outside the projected area on a dark scene. My screen is 102in (painted on the wall with Black Widow self-mixed paint) and is stunning. So, in normal films, you'd never see it.

Another way to view this is by looking at the lens of the projector when it's projecting the image. You can see a miniature 16:9 image on the lens, but of course, outside this 'mini image' the lens still shows light. I noticed this with every projector I looked at. So,







Barn doors: on lights, yes, but on a projector...?

these 'shutters' to get rid of all the light outside the projected area. When I picked up my old mouse mat, I was stunned how far down I could shield the light from the lens before it encroached upon the projected image. I think they call it 'lens offset'?

In point of fact, in an earlier iteration of setting up my projector, I was forced to use heaps of keystoning (since removed). Under those conditions, I noticed a lot more stray light outside of the projected image, so being curious, I contacted the main technical bods in Taiwan. I got a nice picture from them showing how the image outside the main DLP projected image is normal for most PJs, and gets worse with increased keystone.

I've built my AV room in the last six months and it has only just been commissioned. It's 100 per cent not a 'Starship Enterprise' room, but very well constructed (finished) and uses some very unusual speakers from Axiom (Canada). It think it is a terrific sound. Full kit list is: Viewsonic Pro8200; Onkyo TX-SR-608 amplifier; Sony BDP-S570 Blu-ray player; Humax Fox T2 HD PVR; Axiom on-wall/surround speakers; BK Electronics XXLS-400 subwoofer; D-Line trunking.

I've decided to keep my 7.1 AV system entirely separate from my (soon to be commissioned) 2.0 Hi-Fi. I've been into 'real' audio kit for thirty years or more; it's taken me years to finally get the AV kit set up... hence why the hi-fi follows on after.

We all hanker after Runco levels of performance, but often the room has to be balanced for other uses, too – in my case, the 2.0 audio-only system.

Steve Darnell, via email

The 'shutters' you are thinking of are known as 'barn doors'. They're commonly used on photographic and video equipment to control light levels and direction, but we've never known them to be used on projectors. Certainly this sort of stray lighting problem shouldn't arise in the first place, and you should be looking to cure the cause rather than treat the symptoms.

You say that when you look into the projector's lens you can see light outside the 16:9 image, but this shouldn't be at such a level that it becomes visible in the room and, in any case, if you've noticed the same effect in other projectors, it isn't a problem with your Viewsonic alone.

The 'lens offset' you mention refers to the centring of the image on the lens. If the projected image is centred, this is zero lens offset (usually found only on short-throw lenses). In most projectors, the image is raised higher than

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the lens. Typical lens offsets are between 90 and 110 per cent, with a 100 per cent lens offset seeing the base of the image passing through the centre of the lens.

In the phenomenon known as 'hot-spotting', the lamp is reflected from the screen. This commonly happens when the projector is mounted dead centre of the screen, but in most setups this isn't the case.

Keystoning is the effect achieved by narrowing the top or bottom of the picture to make it symmetrical when the projector is not perpendicular to the screen. If it's done optically, this needn't be a bad thing, but if it's achieved digitally, as is normally the case, this can cause picture distortions and so should be avoided. Horizontal keystoning is less common, though some projectors feature it, or a form of lens shifting.

Mechanical lens shifting allows the user to vary the degree of lens shift, while retaining a rectangular image on a flat projection surface. Another way to cure vertical keystoning is to angle the screen itself, though, of course, this isn't always possible.

As for the 'halo' problem, the most obvious possible cause is a reflective surface in the projector's light path – maybe a table top, or a picture – and covering this up would solve the problem. Otherwise, check the lamp is installed properly and the lens is aligned correctly. Hopefully this, together with an understanding of some of the principles of projector alignment, will help you to [illegible]

DAC's entertainment

My problem is a performance/value-related issue on specific equipment. The question is, is there a real advantage with a higher spec Blu-ray player (with an improved DAC/Video processing chip), if the receiver does the same trick?

I've been looking at the Marantz UD5005 or UD7006 Blu-ray player, to be used with the Marantz SR7005 AV receiver. Marantz seems to pair the UD7006 with the SR7005. The UD7006 has the Anchor Bay ABT2015 video processor and a 32-bit DAC over the specification of the UD5005.

But... if used with the SR7005 receiver, is there any advantage in getting the UD7006 over the UD5005? The SR7005 receiver has the same ABT2015 video processor, and wouldn't the bitstream output use the receiver's 24-bit DAC anyway? Am I correct in thinking that a bitstream output will result in the receiver's DAC being used, and a LPCM output will result in the BD player's DAC being used?

Marantz lists the DAC in the UD7006 as 24-bit, but I understand that though it accepts 32-bit data, it doesn't even approach 24-bit in real terms. So is the 32-bit DAC in the UD7006 an advantage only for CD performance through analogue outputs?

And on the video front... the UD5005 will output a 1080p image anyway, albeit an inferior one. So can the ABT2015 in the receiver be used to enhance the incoming image, or is it too late at that stage?

It looks to me as if the UD7006 doesn't really belong with the SR7005, or any Marantz AV receiver for that matter, as the SR7005 is the flagship model. Is it just a cosmetic thing? Am I wrong?
Paul, via email

We asked Oliver Kriete of Marantz Europe to explain some of the processing issues involved, and here's what he told us:

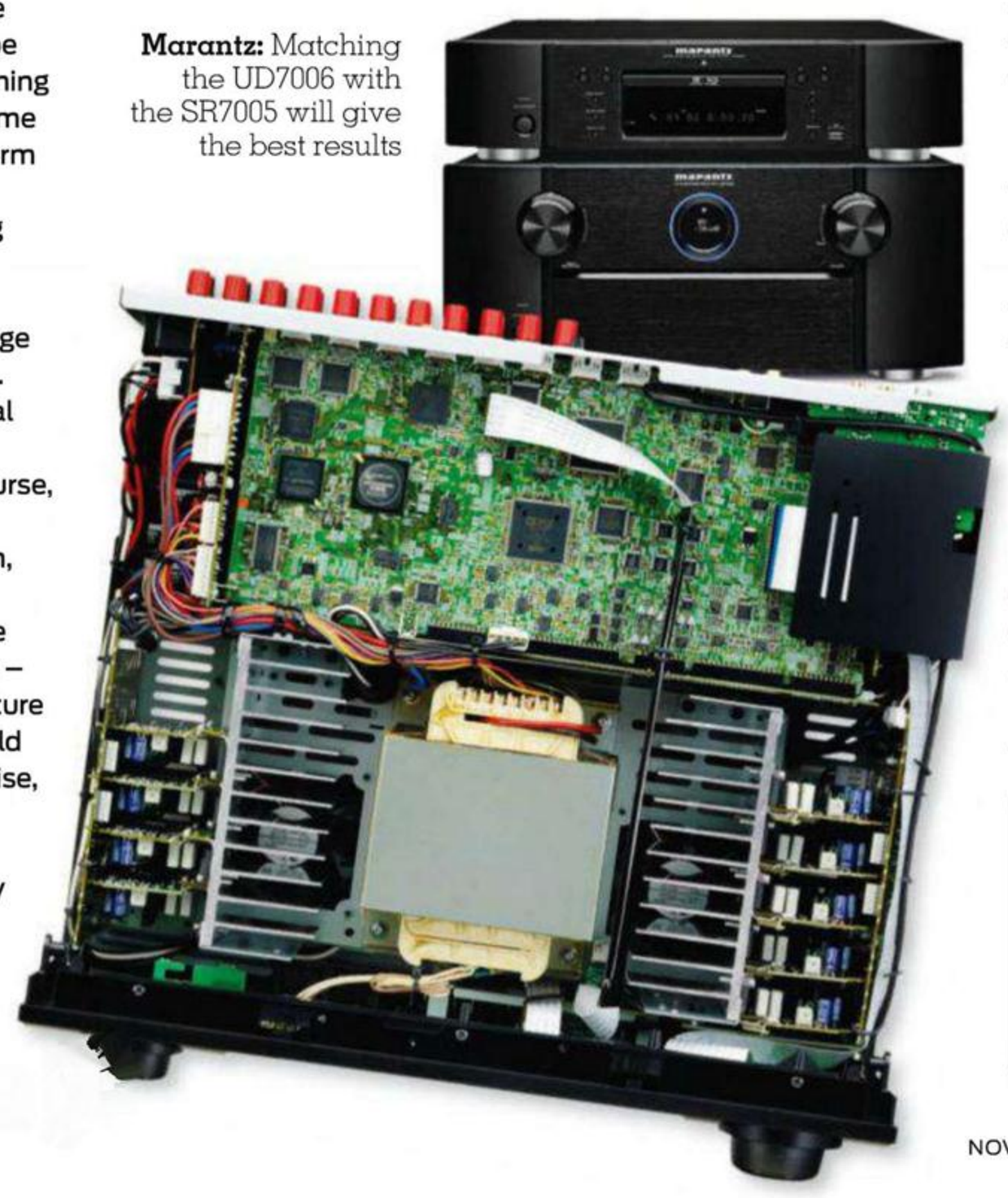
'The advantages of the higher-spec BD player are not only limited to the DAC and Video Chip, but involve the power supply as well, plus certain customised components. Another important aspect is the strengthened cabinet with additional metal plate insert in the top lid. All said, this approach guarantees a more precise data process with less jitter or distortion. It all starts with the source – if something is going wrong there it can't be corrected at the amp side anymore.

'Both the UD5005 and the UD7006 units offers high quality at their respective retail prices. The UD7006 just goes that bit further, improving the refinement on offer and digging out even more detail.

'The 32-bit DAC in the UD7006 is an advantage only through analogue outputs, but not just for CD, but for all audio contents like Dolby True HD or DTS HD Master too. Of course you need to connect it to the 7.1 input on the SR7005.

'It isn't too late for the ABT2015 in the receiver to enhance the image, but it is tweaked to work perfectly with the UD7006, while the SR7005 has to cover a wider signal range, as you might connect your STB, game console, camcorder, etc.

'The difference between a £200 and a £500 unit for sure will be bigger than that between the UD5005 to UD7006, but getting closer to the edge of best possible performance is more and more difficult the higher you get up the price-points. Only in combination with a higher class AV-receiver, like the SR7005, will the total uplift in performance be fully realised and be able to be enjoyed.'



Marantz: Matching the UD7006 with the SR7005 will give the best results

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Due to the volume of letters we receive we cannot guarantee to print/answer them all.

Critical tweaks



ORIGINAL TV IMAGE ©ISTOCKPHOTO.COM/MILAN ZEREMSKI

Martin Pipe continues to put theory into practice as he considers more video calibration issues

Before calibration can begin, it's important to check that all of the equipment is interconnected properly. The best possible option is of course HDMI (or DVI-D, for some older equipment). That way, everything is kept in the digital domain for as long as possible.

In descending order of quality, the others are component or RGB analogue, S-video, composite and RF (UHF-modulated composite). The calibrator then needs to assess the quality of the scaling of the source components and any picture adjustments offered. He (or she) will then select the correct settings for the best possible output. It is a shame that not all such components offer a 'native' output option, which delivers the output for each decoded format 'as is'.

If external boxes such as scalers are used, these must be set up properly, as their output must equate to the native capabilities of the display being used. There's little point in selecting an output that exceeds the display's screen resolution, as the resulting downscaling by the display's own circuitry will only impair the picture quality. To assess scaling artifacts, a test pattern that includes fine gratings ('multiburst') is frequently used. If blocks of these gratings (which correspond to a specific frequency) blur or vary in size, something will [illegible] attention. This test pattern often includes [illegible]s of boxes and diagonal lines, which reveal stepping artifacts. Such lines also help when adjusting sharpness. Any haloes or borders will suggest that sharpness has been set too high. Other patterns and video source material will deal with motion artifacts revealing, for example, that a source component or scaler might be converting between 50Hz and 60Hz (or their multiples) unnecessarily.



Connectors: HDMI is the best, but the older DVI-D will also serve the purpose

Disappearing act

And so we move to calibration proper. As far as greyscale is concerned, one of the key test patterns is the 'pluge' (a BBC acronym of 'Picture LineUp Generation Equipment'). This is used in conjunction with the brightness control to adjust the black level of the picture. Its key component is an area (either a square or bar) that corresponds to a video level of 0IRE. We're still using 8-bit video for the luminance/greyscale channel (and the colour difference ones). Here, 0IRE corresponds to a level of 16 (of the 256 steps that 8-bit video allows). With the brightness control correctly set, this area should disappear into the background or remain faintly visible. Another pluge covers the whites, and this allows 100IRE (an 8-bit level of 235) to be correctly adjusted. Some DVD/Blu-ray test patterns provide all 254 usable levels, which are numbered for identification. After calibration, only steps 16 to 235 should be visible. Another quick and useful

calibration check is the 11-step greyscale bar (0 to 100IRE, in 10IRE steps).

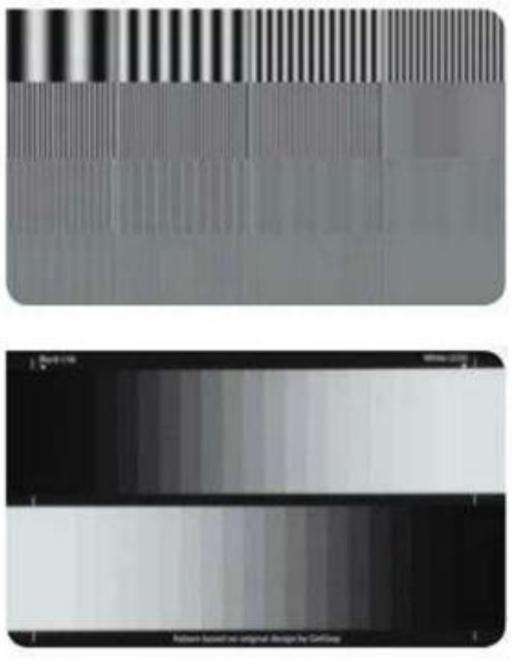
Then there's 'gamma'. In the world of displays, this influences how much light is output for a given video signal level. Gamma correction is used in the world of video to compensate for the deficiencies of the human eye (it's more sensitive to shadow detail than highlight detail) and optimise bandwidth usage. Each display will have a characteristic 'gamma curve' that describes how the output varies from the lowest level to the highest. It can affect the portrayal of detail and depth perception, notably in the darker areas of the pictures. Decent quality displays will allow you to adjust the 'gamma response', usually via a series of onscreen graphic equaliser style sliders that correspond to differing video levels.

Professional display calibration will include gamma optimisation. Here, a sequence of greyscale steps (usually 0IRE to 100IRE in 10IRE steps) are displayed and the light output from each is measured with the colorimeter (or similar device). The software then plots a line (see graph, bottom right) showing these measurements against the known input levels (ie. IRE values). Usually, the red, green and blue values are plotted separately as their contributions to the picture will vary. Calibration involves making adjustments so that the plotted lines match the theoretically perfect ones as closely as possible. For home displays in darkness, the theoretical plot to emulate is one with a gamma of approximately 2.4. If there's no escape from ambient light, smaller gamma values (1.8 to 2.0) can enhance subjective midtone reproduction. Usually, the calibrator will provide a set of presets of this nature for the customer to use in situations when the room is lit.

All of this is a complex and time-consuming set of procedures, which is why calibration ain't cheap. But the results can speak for themselves. When all these adjustments have been done, the entire visible greyscale, from black to white, will be conveyed properly. Bright scenes won't be 'crushed' into a uniform whiteness (a bit like an overexposed photo) and so any detail will be retained. At the other end of the scale, darker pictures will retain their moodiness and atmosphere. Indeed, you'll be able to make out shadow detail that would otherwise disappear into the black of an uncalibrated picture. The layman, faced with a choice of sets, will always quote the set's physical resolution (eg. 1920x1080p full HD) as a key purchasing decision. But there's little sense in having a full HD TV when a fair proportion of that finer detail is effectively lost through improper greyscale setup.

We need to talk about Kelvin

Now it's time to look into colour adjustment. First, there's colour temperature, which is defined as the temperature of a theoretical blackbody radiator (one that absorbs radiation of all wavelengths) that radiates light of comparable colour to that of the light source in question. As a temperature, it's specified in 'kelvins'. It may be counterintuitive, but lower colour temps that look redder are described as 'warmer' while cooler ones, conversely, are said to be 'cooler'. The colour temperature of the lighting used to shoot a scene (which may be daylight) will affect its 'white balance'. Cameras, unlike the eye, do not automatically compensate for this and so correction is applied electronically or with optical filters. The correct colour temperature needs to be maintained throughout editing/distribution and, for that matter, when the result is reproduced on a video display. For PAL/NTSC and HD video displays, a colour temperature of 6,500K was agreed. Others are in use; calibrated daylight movie film, for instance, has a colour temperature of 5,600K.



Written in black and white: Multiburst (top) and greyscale (bottom) test patterns are part of a calibrator's arsenal

Another pro adjustment favourite is the colour bar test pattern. Developed by CBS Laboratories in the early 1970s, this is one of the more familiar tests and an important aid for both display calibration and the servicing/repair of AV equipment. It consists of eight vertical bars. From left to right they are white, yellow, cyan, green, magenta, red and blue. These colours were chosen because they run through all seven possible combinations that use at least one of the three basic colour components of green, red, and blue. The levels of the bars vary; the NTSC SMPTE bars have a 75 per cent (ie. 75IRE) level; PAL colour bars have a 75 per cent or 100 per cent level. They're used to adjust the colour saturation and (in some parts of the world) hue controls. The calibrator will usually wear glasses with red and green filters for the job.

Full colour calibration goes even further. A properly calibrated display will have a colour gamut or 'colour space' that is capable of reproducing the entire visible spectrum. This can be represented by a triangular section within the 1931 CIE Chromacity Diagram – an industry-standard chart that graphically depicts the relationship between hue and saturation. The 'black body curve' within this triangle will show the white point/colour temperature.

Calibrating these colour management systems is very complex and getting it right involves training and plenty of experience. Some AV enthusiasts will do this themselves, but most of us looking to have a TV fine-tuned correctly will call upon a professional. When the bill comes, remember their job is so much more than just fiddling with the contrast setting!

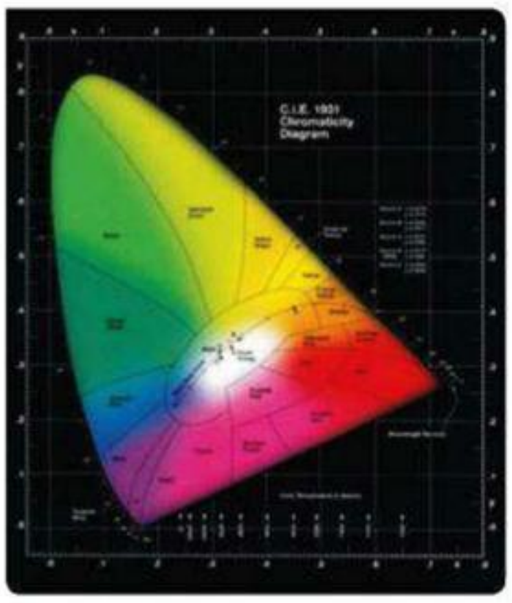
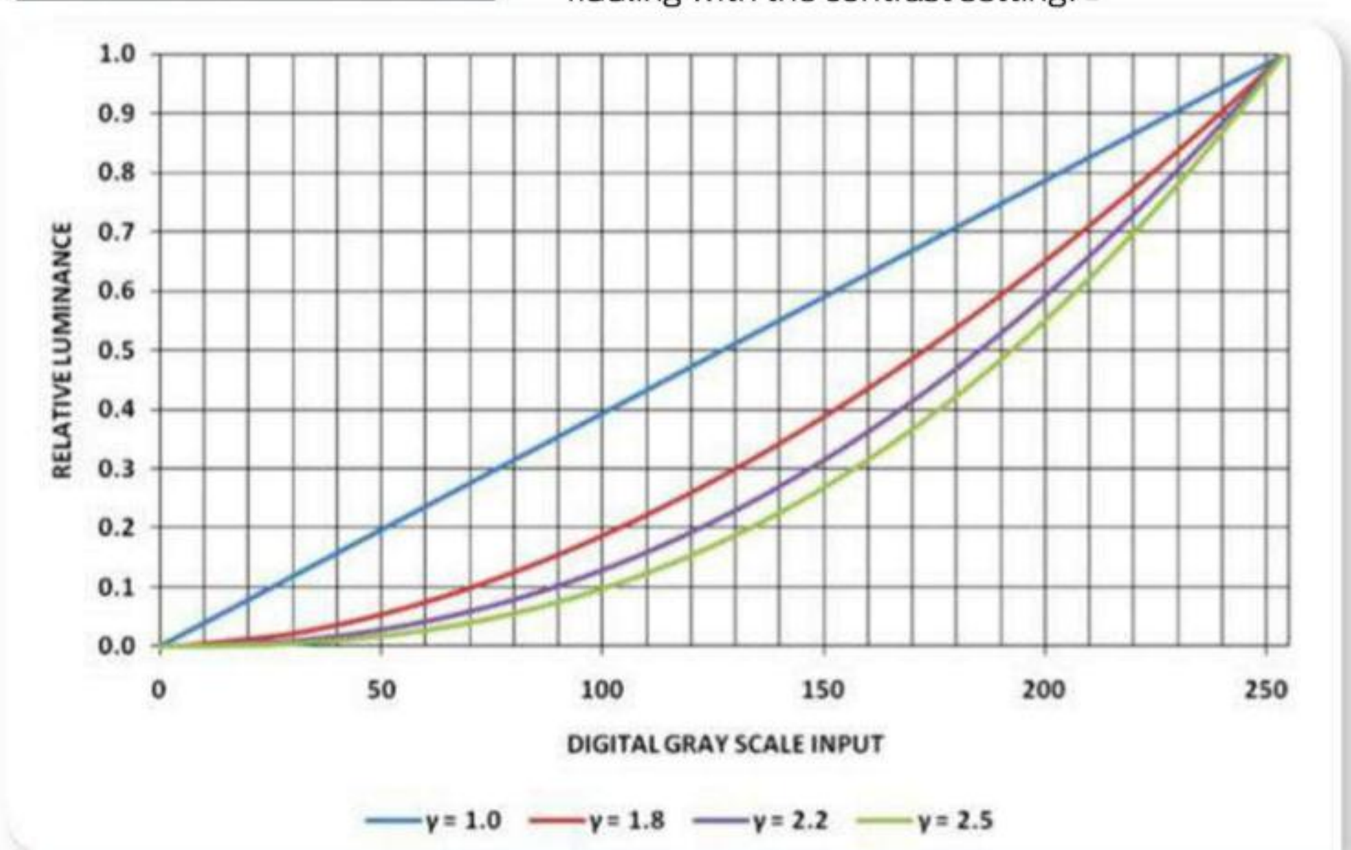


Chart positions: The CIE colour chart and gamma curves are essential calibration tools





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REVIEWS

→Hardware highlights **PIONEER** 7.1-channel THX receiver with Smart control **SAMSUNG** Flagship 60in Edge LED TV **SCANDYNA** Quirky-looking sub/sat package from Denmark **LG** Affordable 50in active shutter 3D plasma **PANASONIC** 5.1 home cinema system **ARTCOUSTIC** Reference-grade on-wall speakers **ROUNDUP** Five 40/42in TVs go head-to-head **AND MORE!**



Master of the Universe

Does Marantz's UD7006 Universal Blu-ray player offer the performance thrills you'd expect from an £800 deck? See p48 for our verdict

HCC Ratings key

Outstanding	1 2 3 4 **5**
Above average	1 2 3 **4** 5
Acceptable	1 2 **3** 4 5
Disappointing	1 **2** 3 4 5
Dire	**1** 2 3 4 5

HCC DOESN'T BELIEVE IN OVER-PRAISING HARDWARE. CONSEQUENTLY, A THREE-STAR RATING SHOULDN'T BE CONSIDERED A BAD RESULT – IT SIMPLY MEANS THAT A PRODUCT PERFORMS ACCORDING TO ITS CATEGORY POSITION. A FIVE-STAR RATING IS ONLY AWARDED IN EXCEPTIONAL CIRCUMSTANCES

Apple-tiser amp

Richard Stevenson considers this receiver as Pioneer's homage to Apple, and calls it the VSX-2021 Steve Jobs Signature Edition

The VSX-2021 is yet another gorgeous-looking



AV/CV

PRODUCT: Apple-centric, feature-rich AVR

POSITION: Mid way up Pioneer's AVR ladder

PEERS: Denon AVR-2312; Harman AVR 460

Pioneer's VSX-2021 is a receiver for the Apple generation. It's all but intrinsically linked to the company's wares with iPhone/iPad control Apps, dedicated music sharing for multiple iPods, remote control of the latest OS devices and full AirPlay integration. Even the user manual and set-up navigator are fully interactive iPad Apps. Okay, this £800 receiver can be operated with its own remote control and you can ignore the Apple-centric features, but that would be like buying a BMW and never using the iDrive. Even those VSX-2021 buyers with a penchant for Android devices (there is an app for that platform, too) might find themselves considering an iPad for its Pioneer-centric features alone.

Where that Pioneer/Apple allegiance really excels is in the control interface. Pioneer's iControl AV App of a year or so back was so far ahead of the curve that no AVR maker has yet caught up. **The latest iControl AV2 App adds a raft of new gizmos alongside the truly inspired, tilt-sensitive level adjustments and gorgeous animated App UI from the first edition.** You now have access to a wider range of the AVR's features including finer adjustment of phase control, PQLS, group delay, virtual speakers for depth, height and virtual rear back and access to Pioneer's Auto Sound Retriever, which spruces up lossy MP3 and low bitrate net radio streams.

For those social ravers out there, another Pioneer App called AirJam can be used in conjunction with the optional AS-BT200 Bluetooth adaptor, allowing up to four Apple devices to be simultaneously paired to the 2021. Each user cues up songs from their device to form a giant multi-party playlist, which is simultaneously displayed on the screen of each device. Among my friends, I reckon this would lead to complete bun-fight by track three.

Widget daddy

However, the ultimate widget among widgets award goes to iControlAV's Finger EQ feature. This brings the concept of a graphic equaliser into the iPhone age by mapping a frequency response curve to the sweep of your finger across the screen. Great fun. More sensibly, the App also affords Zone 2 and Zone 3 control, videos explaining various features (see these on Pioneer's excellent YouTube channel) and a readout of precise audio and video signal information. While all this works beautifully on an iPhone/iPod, the dedicated iPad version of iControl AV2 is even better. It makes you realise why Crestron and AMX touchscreens have always been so popular. And, frankly, a decent App on an iPad is both better and cheaper than dedicated controllers. Just to prove I haven't turned into an Apple freak overnight, my ability to get iControl AV2 to turn the VSX-2021 off but not back on again was really annoying [Pioneer reckons you need to fiddle around in the Network Setup Menu – Ed].

Respect to the spec

Apple sauce aside, the VSX-2021 is a very solidly specified receiver and well paced with rivals at this price point. The THX Select2 badge is proudly displayed at the top of Pioneer's features list, followed closely by the class-leading seven HDMI inputs and twin simultaneous HDMI outputs. These are v1.4 configuration so they support Audio Return Channel from your TV back to the amp, 3D pass-through and, at some point in the future, 4K2K video. Sadly, there's no Ethernet channel embedded in the HDMI ports to exploit the IP networking feature of v1.4, but you wouldn't currently find many devices to connect an Ethernet HDMI cable to anyway. The Pioneer offers hard-wired Ethernet as standard (with optional wi-fi adapter), offers vTuner net radio and is Windows 7 and DNLA-compliant, just to prove that the world doesn't end at Cupertino.

Under the hood are seven channels of power and processing for all our favourite HD-audio movie >

→ Specifications

Dolby TrueHD: with DD Plus, DPL IIz
DTS-HD Master Audio: with DTS Express
THX: YES THX Select 2 Plus
Multi-channel audio (claimed): 7 x 150W
Multi-channel output: YES 7.1
Multi-room: YES Two additional zones
AV inputs: YES 4 x composite video & phone audio; 3 x optical and 2 x coaxial digital audio
HDMI Switching: YES 7-in 2-out, v1.4
Video upscaling: YES to 1080p
Component video: YES 2-in, 1-out
Dimensions : 435(w) x 442 (d) x 185(h) mm Weight: 13.8kg
Also features: iControl AV2 control App; AVNavigator interactive manual; AirPlay enabled; Air Jam multi-party playlists (with optional Bluetooth module); PQLS multi-channel jitter reduction; Windows 7 & DNLA certified; FM/AM, vTuner; MCACC RoomEQ; Ethernet; wi-fi ready; USB port

formats plus Dolby ProLogic IIz for height channel output using terminals at the expense of rear-back speakers. Processing for anything remotely Apple is a given, including Apple Lossless (via Airplay at least), and this is also one of the first AVRs to offer support for ultra-high 192kHz/24Bit FLAC recordings. For EQ duties you get the latest version of Pioneer's MCACC room EQ system. Alongside the auto-setup and auto calibration features, deep, deep,deep in the advanced EQ Professional menus you will find audio controls of mind boggling complexity.

More equal than others

You can vary the EQ time positioning to best adjust for room nodes that build up over a short period and can run the calibration with different output biases. The EQ emphasis can be put on pure frequency response, phase characteristics, multi-point standing wave control or even balance the surround speakers to match the front main pair. There is no simple tweaking of frequencies as a manual option, but you do have control over channel levels to +/- 0.5dB and speaker distance in 1cm increments. Quite who keeps their head that still during a movie is a mystery to me, but for the sake of absolute accuracy you can't beat Pioneer's MCACC.

Which brings me to the overall package and what a big old beast the VSX-2021 is. It is tall and deep in stature although I have no idea why. Inside there is a chunky transformer, several PCBs, a relatively compact rack of cooling fins and enough air-space to pilot a Sopwith Camel. The mostly empty chassis does nothing for the feel or the build quality either. The case is rather tinny, the front flap feels like it will fall off if a child gets within 10 paces, and the speaker terminals flex alarmingly when you hook up even moderately chunky cables.

That said, the VSX-2021 does look rather lush. **It is smooth, sleek and black with the biggest knobs I have ever seen outside of a government conference.** The style is pure Pioneer, but if you happen to own a black iPad and squint a bit, there is a cosmetic synergy too.

Maybe because Pioneer pretty much expects you to control the VSX-2021 with a portable Apple device, the supplied remote control pants. It is a small device with



Back up: We advise you dump this handset in favour of iPad/ iPhone control

with my sausage thumb. On the plus side, it is fairly logical in that it emulates most standard remotes and offers a red backlight for fumbling around in the dark. If you do already own an iPhone, iPad or iPod Touch you might as well leave the standard remote in the box – you won't even need it for set-up.

Pioneer's MCACC is not the quickest auto set-up system these days but it is thorough, has a progress bar and explains what it is up to every step of the way. There are memory slots for different set-up balances and configurations, and the system hand-holds you through the deeper features nicely. The manual is actually a fully interactive program supplied on PC DVD-Rom and is also available as an iPad App... you won't be surprised to hear. This runs a step-by-step connectivity guide followed by information on using the MCACC setup.

The MCACC knack

Then the AVNavigator gets really cool. It allows you to configure your connectivity, the MCACC features and settings on a PC or iPad and then download them to the AVR over your network. Post setup,

Connections

A Magnificent seven

There are six HDMI inputs on the rear panel and one around the front, which ought to be enough for all your digital sources

B Two's company

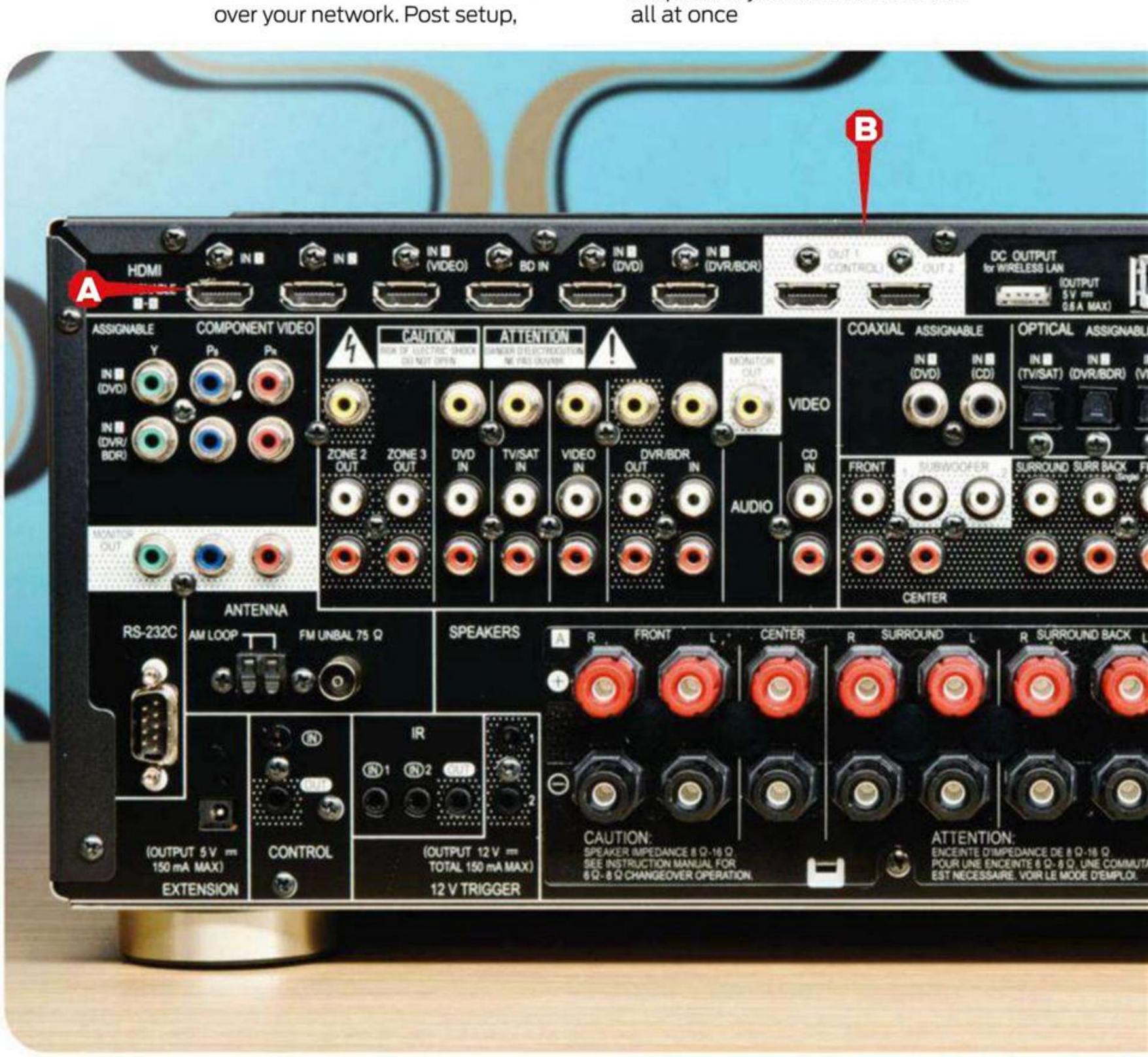
And with twin HDMI outputs you can use the VSX-2021 to feed two displays – a TV and a projector, for instance

C Networkable

Use this Ethernet jack for connecting the VSX-2021 to your home network. Wireless fans will need to add an optional dock

D Two's company

The speaker terminals run to nine channels, but you'll need to use the pre-outs for an additional stereo amplifier if you want to run them all at once





Get the best: Use MCACC RoomEQ to achieve home cinema heaven

the EQ data graphs are displayed in AVNavigator software with ongoing ability to tweak and adjust. And, even cleverer still, the interactive manual reacts to button presses on the receiver itself. So if you press Phase Control, for example, AVNavigator immediately jumps to that page in the manual. If you keep the program running on your iPad or PC, Pioneer automatically loads updates and information on firmware upgrades. Running on a PC, AVNavigator is incredibly slick; on an iPad it is the blueprint not just for all future AVR user guides, but probably all connected electronic goods too, from Smart TVs to digital radios as well. It is that good.

And finally, you might just get around to playing a movie, which is immensely rewarding. Running with the MCACC EQ and full-band phase control on, the VSX-2021 is crisp, clean and blessed with a hugely spacious soundstage. The balance is one of detail, accuracy and special effects etched into the room with laser-like precision. Bass is tightly controlled with breathtaking slam and absolutely no bloat or overhang. Other AVRs may sound weightier, but the breathy-clarity that the Pioneer exhibits right across the spectrum is revealing – not unlike really good hi-fi in fact. Switch off the phase control and MCACC and you get a relatively cloying and congested sound that is far from ideal. The whole front soundstage is squished together and there is a sluggish malaise that just won't budge no matter how many times you shift the speakers around. Clearly the 2021 is built from the ground up with MCACC in mind and it is essential to use it.

As Leonardo Di Caprio speaks to Ellen Page in her first lucid dream in *Inception* (Blu-ray), the Pioneer paints an atmospheric portrait of the bustling city and coffee bar, complete with passing traffic and clinking cups. The dialogue is perfectly articulated and projected well out into the room with intonations and accents faithfully reproduced. As Ariadne realises she is in the dream with the scenery exploding around her, the Pioneer digs deep into its reserves of power and punches out each explosion as a cacophonous mix of bass power and fragment effects. The snap back to the scene in the laboratory immediately focuses the scene on the dialogue and music playing gently in the background. It is as close to genre agnostic as AVRs get, being damn good at them all.



Upping the ante

The VSX-2021 sets new standards of operational flexibility in the AV receiver genre and does so backed up with stunning audio engineering. The latest MCACC is nothing short of a revelation for a sub-£1,000 receiver, and works miracles on the Pioneer's slightly lacklustre un-EQ'd sound in my room. The rather lightweight build quality aside, the VSX-2021 offers class-leading features, performance and flexibility. In fact, it is truly in a class of its own

Tech Labs

Power consumption: Watts



Idling: A fairly high figure, but there's a lot of electronics to keep ticking over



Powered: Real world consumption (playing a movie) averages 130W

Power ratings: Watts (8Ω, 0.5% THD)



2-channel 8Ω: We measured 120W into 8Ω in two-channel mode, which equates well to Pioneer's 150W/6Ω claim



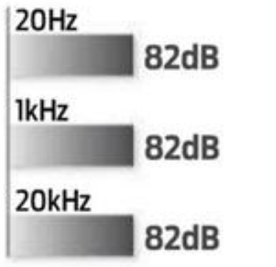
5-channel 8Ω: There's a drop-off in power in five-channel mode, but it's still a good performance

Untainted: Watts



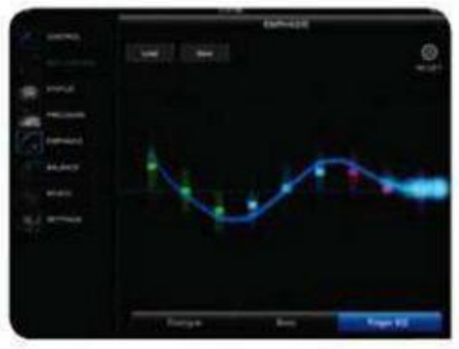
Fidelity firewall: A measurement of power untainted by distortion (0.05% THD, 8Ω, 1kHz)

Signal/noise: dB



S/N tests: Solid measurements across the frequency range

Menu: On Screen



At your fingertips: The iControlAV2 app works best on an iPad, where features like Finger EQ really come to life



HCC VERDICT

Pioneer VSX-2021
£800 Approx

Highs: Amazing operational flexibility; crisp and spacious sound; Apple-centric features

Lows: Lightweight build quality; a remote control you'll toss away

Performance: 1 2 3 4 **5**

Design: 1 2 3 4 **5**

Features: 1 2 3 4 **5**

Overall: 1 2 3 4 **5**

Musical maverick

Not just another cookie cutter disc spinner, Marantz's new Universal Blu-ray deck has a mind of its own. **Steve May** explains

To say the UD7006 Blu-ray player is a bit of a maverick is like saying *Monty Python's Flying Circus* is only mildly amusing. This spin-'em-all player has a distinctly idiosyncratic way of doing things. But it's worth sticking with, not least because it sounds gorgeous and looks great.

Build quality is formidable. The centrally positioned disc loader is no clattery tray, more a precision-engineered, super-slim disc feeder. Its substantial 5.1kg weight is a good sign. Some of this is down to the inclusion of a secondary top plate for enhanced rigidity.

Meanwhile, the curved fascia ensures the UD7006 looks better than almost every other BD-spinner on the market.

Rear selection

On the back panel there's a single HDMI output, plus a bank of 7.1 analogue audio outs, a coaxial digital audio port, Ethernet and component video. The latter has been hobbled by the AACS copy protection regulators and will only output Blu-ray at 480i.

→ Specifications

3D: *YES*
Upscaling: *YES* to 1080p
Multiregion: *NO* Region B BD/R2 DVD
HDMI: *YES* one v1.4a
Component: *YES* one ouput
Multichannel analogue: *YES* 7.1 phonos
Digital audio: *YES* coaxial digital output
SACD/DVD-A: *YES/YES*
Dolby True HD/DTS HD decoding: *YES/YES*
Dolby True HD/DTS HD bitstream: *YES/YES*
Profile 2.0: *YES* with 1GB internal memory for BD-Live
Dimensions: 440(w) x 331(d) x 107(h)mm
Weight: 5.1kg
Features: Ethernet; USB; network media streaming with album art support; DLNA 1.5 and uPnP cetrified; YouTube integrated; source-direct output; ABT2015 video processor; RS232 jack

The centrally-mounted disc feed is a superb example of the brand's precision engineering

This makes image quality via this connector worse than DVD (which is delivered at 576i). Frankly the only thing worth plugging into a component output these days is a sock. Rather maliciously, none of the phono connectors are colour coded, which is somewhat unhelpful when you're lacing the thing up in a partially lit cinema room.

Custom installers will be interested to note that there's also an RS232 control port and IR flasher mini-jack on the rear. This makes it useful for integrating with sophisticated control systems. The front of the unit features a USB port for media playback.

The UD7006's glow-in-the-dark remote is large and comprehensively festooned with buttons which allow you to cycle through video output resolutions or toggle modes. The instruction manual that accompanies this player talks a lot about toggling modes. I think it does this primarily to keep the hoi polloi at bay.

Memory master

The UD7006's set up GUI is best described as functional, with drop down text menus from simple graphics that represent General, Video, Audio and Network settings.

From here you can achieve a high level of picture customisation. **Menu options allow users to moderate mosquito and block noise, adjust gamma, squeeze contrast or inflame the chroma level.** Values can be consigned to five different memory banks.

In amongst the player's other feature wrinkles is the provision of >

AV/CV

PRODUCT: Top-end Universal Blu-ray player

POSITION: Marantz's most advanced 3D deck

PEERS: Cambrdige Audio Azur 751BD; Oppo BDP-95EU



Light up: The supplied remote is backlit – useful as the buttons are small





Help the aged: The bank of phono outputs make this a good match for a legacy AVR

a Playlist function, which allows you to add files from your network sources. There's also a choice of wallpaper colours for the menus. The UD7006 even enables you to dim the display, from Normal to Off in four increments; a nice home theatre-savvy touch.

Four icon buttons dominate the main Home screen: Media Player, Set up, YouTube and Quit.

The MediaPlayer icon immediately takes you onto your local network. DLNA 1.5 compliant, the UD7006 instantly identifies connected DLNA and uPnP NAS and PC devices. Plug a USB stick in and this appears at the top of the same list. You can then navigate all connected sources for sound and vision files.

Audio file support is limited to MP3, WMA, AAC and WAV. There's no compatibility with FLAC, Ogg or APE file extensions. Video fares better in that hi-def MKVs play alongside AVI, MOV, MP4 and TS extensions.

The player's at its best with Blu-ray, disgorging ravishing levels of detail, with beautiful gradated colours and no self-generated artefacts.

Battle: LA, a wondrously sharp video encode, is made all the more extraordinary by the onboard Anchor Bay ABT2015 video processor.

The Marantz is 3D compatible out of the box and again provides impressive images. *Step Up 3D* (I fancied a change from Avatar) comes across in all its depth-enhanced high-school dance-drama glory, with plenty of sharpness.

The deck's delivery of DTS-HD Master Audio and Dolby TrueHD bitstreams is predictably exemplary, but more significantly its PCM performance is first class.

The UD7006 isn't too slow to loads Blu-rays, though not as fast as [illegible]. And it does take a good while to wake up from standby and eject the tray.

Potent upscaling

Those with a large legacy disc collection will be pleased to hear that DVD playback is solid. Deinterlacing and upscaling come courtesy of the Anchor Bay processor. It makes a lot of sense to adjust a set of parameters specifically for DVD, so they are ready to engage at the press of a button. The player also gives you the option of outputting content as Source Direct. This is helpful if you'd prefer your AV receiver, an outboard processor or even the display to handle video upscaling duties.

As a music player, the UD7006 is extremely accomplished, with provision for both SACD and DVD-Audio. SACDs output as PCM only (there's no DSD direct), but both multichannel and stereo feeds exhibit fabulous clarity and separation. You need to manually guide the player to these formats via the mode selector on the front panel if you're using a multi-layer disc, though.

The UD7006 also does an astonishingly good job with standard CDs. Heard at their best via the player's analogue output (which measured well for jitter in our Tech Labs) and routed through a 32-bit PCM1795 DAC from Texas Instruments, the UD7006 paints a beautiful soundscape.

When it comes to AV fidelity, the UD7006 is an undeniable star. Not only can this plucky Marantz hold its own with the best of today's Blu-ray players, but it also thrils with music.

Sure, the user experience can at times seem a little clunky, the VOD services are limited to YouTube and it's disappointing that audio file support doesn't extend to FLAC. But this is a Marantz and for many that will be compensation enough.

→ Tech Labs

Power consumption: Watts

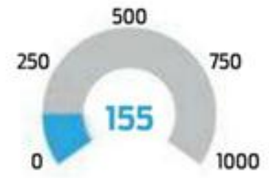


Idling: When it's ticking over the Marantz consumes 25W – but putting it in standby drops it down to under 1W



Powered: Playing a disc draws an extra 3W of power

Audio Jitter: ps



Sound: The UD7006's analogue audio jitter figure of 151 picoseconds indicates solid construction

Loading: Boot/Java



Disc loading & Java: Pretty slow to wake up from Standby

Menu: On Screen



Tweak zone: The Marantz's setup menu is clean and easy to understand. Tweaks include adjusting the 3D settings to suit the size of your display



HCC VERDICT

Marantz UD7006
£800 Approx

Highs: Sharp Blu-ray performance; ultra high grade CD playback; integrated YouTube Leanback
Lows: No FLAC streaming or secondary HDMI output

Performance: 1 2 3 **4** 5
Design: 1 2 3 4 **5**
Features: 1 2 3 **4** 5

Overall: 1 2 3 **4** 5

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Adam Rayner *HCC #183*

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Flatscreen finesse

Mark Craven makes some space in his living room for Samsung's flagship LED screen ... and doesn't want to let it go

AV/CV

PRODUCT: 60in Smart 3D LED TV

POSITION: Samsung's flagship LED set

PEERS: Panasonic TX-P65VT30; Philips Cinema 21:9 Platinum



The wafer-thin bezel is hardly visible and won't encroach on viewing

HOME CINEMA Choice ★★★★★ BEST BUY



With the price of Blu-ray players and AVRs plummeting, it's strangely reassuring to see Samsung's UE60D8000 flaunting its £4,300 price tag – proof that the Korean brand hasn't completely eschewed the top-end of home cinema.

And high-end this set most certainly is, with a feature list that reads like a Who's Who of AV: built-in wi-fi, USB PVR recording, Freeview/Freesat HD tuners, active shutter 3D playback and a dizzying array of Smart features are the set's highlights.

Of course, you can get all that on Samsung's UE55D8000 and at about £2,000 less. So prospective buyers of this 60in model need to work out whether the extra screen real estate is worth the additional outlay, and whether or not they'd be better off going for a projector instead.

Projectors, though, don't come with Samsung's really quite infectious Smart Hub portal, the snazzy jump-off point for VOD (BBC iPlayer, LOVEFiLM, Acetrax, etc), apps (Google Maps, Twitter, Facebook and many more), and DLNA media streaming from your connected devices.

Nor does a PJ look so damn sexy in your viewing room. Samsung's designers have wrapped the panel in a ridiculously thin bezel that might as well not be there, and squeezed everything into a cabinet only 30mm deep. Tasty.

Exquisite

As for picture performance the UED608000 is capable of delivering some exquisite hi-def images, both in regular old 2D and the new-fangled 3D format.

Feed it a Blu-ray platter and it returns a beautifully sharp, clear and detailed image that'll have you purring. With *Fast & Furious 5*, the dirt and dust of the Rio de Janeiro locations was tangible, as was the movie's filmic level of grain.

I said 'capable' earlier as other aspects of the picture require a bit of menu fiddling to fulfil their potential. Head to the Movie preset (and select the Warm 2 colour temperature) for, in my opinion, the most appealing image – although you'll want to experiment with the backlight, brightness and contrast settings depending on your ambient lighting.

On these settings, the UE60D8000 offers a very naturalistic colour palette and a startling level of contrast that makes hi-def movie viewing a real pleasure. Motion handling is solid, too, even with Samsung's Motion Plus processing deactivated – there's a loss of clarity when things get going, but it's not disastrous.

Of the other presets, Dynamic and Natural ramp up the colours, sharpness and contrast to an almost comical degree and are best avoided. You might want to use the Standard mode for regular daytime telly viewing, though.

Advanced picture tweaks (including gamma, white balance and colour management) should provide enough tools for a professional calibrator to fine-tune the UE60D8000 to pro standards.

3D images are equally impressive. Much of this comes from the set's pin-sharp clarity, minimal crosstalk issues and its inherent brightness; I hardly noticed the darkening effect of the active shutter spex. The screen size and thin bezel add to the 3D effect, too.

Head-scratcher

Add in a decent standard-def performance, super slick UI and smartphone control and it's hard to find fault with the UE60D8000. I did manage, though; the audio performance is average at best, and I couldn't get it to play any DivX files stored on my NAS. Apart from that I'm left scratching my head

Specifications

3D: *YES* Active shutter; 2D-3D conversion
Full HD: *YES* 1080p/24
Tuner: *YES* Freeview/Freesat HD
Component video: *YES* One input
HDMI/DVI: *YES* 4 x v1.4
PC input: *YES* D-Sub
Resolution: 1,920 x 1,080
Sound: 2 x 15w
Brightness (claimed): N/A
Contrast ratio (claimed): Mega
Dimensions: 1,357(w) x 779(h) x 30.5(d)mm Weight: 21.6kg
Also featuring: Smart Hub; AllShare media streaming (Ethernet and built-in Wi-Fi); 3 x USB inputs (media playback and timeshifting); advanced picture tweaks (greyscale, gamma, colour management); Motion Plus; smartpho trol



Sleek remote: The backlit handset looks suitably high-end and easy to get to grips with

Tech Labs

Power consumption: Watts

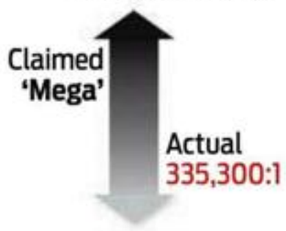


White screen: A high figure, but very reasonable for a set this size – and proof once again of the efficiency of LED TVs



Test footage: With movie footage, the UE60D8000 averaged 120W

Contrast: ratio



Picture: In Standard Mode we measured contrast at 335,300:1 with a luminance of 103.7fL. In Movie mode it drops to 60,300:1, and luminance plummets to 17.6fL

Colour temp: Kelvin



Presets: In Movie mode, the Warm 2 preset measured closest to 6,500K. Calibration to that figure is possible
Cool: 10,400K
Standard: 8,700K
Warm 1: 6,800K
Warm 2: 6,400K

Menu: On Screen



Smart hub: This is your gateway to all manner of VOD and app fun – plus your own media

HCC VERDICT

Samsung UE60D8000
£4,300 Approx

Highs: Excellent picture quality; 60in screen size; intuitive UI; extensive feature list
Lows: Audio can't do the images justice; it ain't cheap

Performance: 1 2 3 4 5
Design: 1 2 3 4 5
Features: 1 2 3 4 5
Overall: 1 2 3 4 5

Killer pods eyeball your living room

Adrian Justins is having a Ball with this perfectly formed speaker system

In issue #196 we reviewed the reference status B&W 800 Diamond series, a huge 5.1 system affordable only to those with a banker's bonus in their pockets. But the DNA of B&W's distinctive domes is available to those of more modest means in the guise of Scandyna's pod speakers. The licensed technology lends itself perfectly to the Danish brand's Micropod SE speakers, which can be bought individually, in pairs or, as here, with the Ball subwoofer. Our models were supplied with 1950s-style, aircraft-grade aluminium spikes, but Scandyna also supplies floorstands and wall-mounts.

Visually, the Micropod SE is a real delight, blending its unmistakable B&W heritage with the playfulness of a one-eyed Olympic mascot. The build quality is reassuringly solid, each speaker being crafted from thick ABS plastic with a glossy black, white or red finish.

The Ball subwoofer complements the curvy look of the satellites. It features a 60W class D amp and, although the main controls for setting the cross-over and volume are on the underside, it comes with a credit card style remote that has basic on/off and volume up/down controls. A bright blue LED on the sub's rim tells you if it's switched on and flashes when you reach the limits of the volume. It could be hidden away behind the

Small-space oddities: They may look cute, but they pack a sonic punch



sofa, but almost demands to be located in a place where it will draw admiring glances. It is undeniably a cinch to set up and use.

Pod potential

The Micropods are obviously suited for use as desktop speakers, but do a lot more than liven up iTunes on a computer when partnered with a sub and a decent amp, such as my Onkyo TX-NR709.

They prove more than adept at handling complex multichannel Blu-ray material, delivering a finely balanced soundstage that produces clean and crisp dialogue, and reveals the kind of detail on *The Fantastic Four*'s DTS HD MA soundtrack that often gets lost in less refined systems of a similar size. As the fire truck races on over the Brooklyn Bridge you can clearly hear the high-pitched Dalmation yelp despite the cacophonous sounds of an explosion and the orchestrated soundtrack.

When the cops pull their guns on the Thing, the precise detail of triggers being pulled back and heavy breathing, enhance the tension of the situation. When an aerial shot shows a helicopter sweeping across the frame, the rotor sound pans sweetly across the rears. It's just enough to help place you there.

Avatar is acclaimed for its visuals but the Blu-ray has a fine multichannel soundtrack that proves just how good these speakers are. With the volume set at the THX reference level, the sub rumbles enthusiastically when we see the spaceship chugging towards Pandora. It's nicely controlled and doesn't overwhelm the satellites, whose tonal balance is suited to voices and acoustic mid-range sounds. Jumping to the enveloping helicopter sounds of the first sortie on Pandora proves the limitations of the system: it doesn't like excessively loud volumes, preferring the nuances of subtler effects.

Small wonders

For anyone seeking an unorthodox looking system that neither breaks the bank nor dominates the living room, this is a more than credible home cinema solution that creates a surprisingly effective soundfield from such small cabinets

AV/CV

PRODUCT: 5.1 funky speaker system

POSITION: Slap bang in the middle of the seven-strong pod range

PEERS: Cambridge Audio Minx S325; Canton Movie CD 105



Specifications

Scandyna Micropod SE LCR

Drive Units: 1 x 2.5in long throw bass/midrange Kevlar piston; 1 x 1.5in free-mounted soft dome tweeter
Enclosure: Two-way bass reflex, sealed
Frequency Response: 40Hz-140Hz
Sensitivity: 88dB (2.83V @ 1m)
Power handling: 10-100W
Dimensions: 125(w) x 160(h) x 114(d)mm
Weight: 0.95kg

The Ball

Drive Unit: 1 x 6.5in
Enclosure: 4-layer woofer, sealed
Frequency Response: 40Hz-140Hz
On board power: 60W Class D amp
Dimensions: 315(w) x 290(h) x 315(d)mm
Weight: 3.75kg



HCC VERDICT

Scandyna Micropod SE/The Ball
Approx £900

Highs: High-quality build; great vocals; size-defying performance
Lows: Sub may not have enough grunt for some; not suited to larger rooms

Performance: 1 2 3 **4** 5
Design: 1 2 3 **4** 5
Features: 1 2 3 **4** 5
Overall: 1 2 3 **4** 5

→ Specifications

3D: *YES*, active shutter
Full HD: *YES* including 1080p/24
Tuner: *YES* Freeview HD
Component video: *YES* 1 x input
HDMI: *YES* 3 x v1.4
PC input: *YES* 1 x D-Sub
Resolution: 1024 x 768 Sound: 2 x 10W
Brightness (claimed: N/A
Contrast ratio (claimed): 3,000,000:1
Dimensions: 1168.4(w) x 711.3(h) x 52.5(d)mm
Weight: 27.2kg
Also featuring: One pair of glasses included; 600Hz subfield drive; USB media playback; colour and gamma management; noise reduction processing; 2D-3D conversion

Be warned: the 50PW450T doesn't have Full HD resolution

3D's most haunted

LG's 3D-capable plasma rewrites the rule book, says crosstalk ghost-hunter, **John Archer**. It's just a pity that in it's the wrong way...

AV/CV

PRODUCT: Budget 50in 3D plasma with built-in active playback

POSITION: At the bottom end of LG's plasma lineup

PEERS: Samsung PS51D6900; Panasonic TX-P50ST30

Given that most brands are still adding a premium for their 3D TVs, this LG's price is remarkable and could usher in a new era of 3D affordability. So far active 3D plasma TVs have tended to be more expensive than equivalent-sized LCD 3D TVs, and not suffered as badly from crosstalk.

This new affordability comes at a hefty performance cost, though, because there are pretty horrific amounts of crosstalk noise during 3D viewing. In fact, it is so severe that it rivals even the worst LCD 3D TVs.

3D non-starter

Crosstalk's double ghosting noise is blatant during almost any 3D scene, but it's especially egregious during dark scenes and shots with extreme levels of depth, such as the tough lantern sequence in *Tangled*, or the Golden Gate Bridge sequence in *Monsters Vs Aliens*.

At least its 3D colours are well saturated, even with LG's chunky but comfortable glasses on; and brightness levels are higher than many rival entry-level 3D plasmas, revealing more shadow detail.

However, the crosstalk fatigues your eyes, becoming the only thing you see, and robbing 3D Blu-rays of the sharpness that's supposed to be active 3D's point.

Even worse, the 50PW450T isn't Full HD and the resolution tops out at 1024 x 768. This pixel structure is now rare, especially on TVs as big as 50in. So suddenly it doesn't look like such a bargain.

The design is perfunctory, despite the best efforts of a glamorous desktop stand. Its connections, though, are fair enough, with three HDMIs, a single USB with photo/music/video playback potential, and a LAN port. This LAN won't access LG's Smart TV online portal. Nor can it access a networked PC, either. It's only there as mandatory support for [illegible] Freeview HD tuner.

Away from 3D material this screen fares better. Tucked within the 50PW450T's menus is a comprehensive array of ISF-approved picture calibration aids, which is handy, since tinkering with the provided tools can yield quite respectable pictures where 2D HD sources are concerned.

For instance, dark scenes enjoy a fairly deep black level response and solid shadow detail reproduction versus LCD rivals. The good contrast effort isn't reduced by wide-angle viewing as per LCD models, either.

Hi-def sources also look decently crisp considering the set's lower resolution and colours are fulsomely saturated and dynamic. Enthusiasts will, however, bemoan both the appearance of striping and patchy colour blends and the amount of dot crawl in HD pictures, particularly during camera pans.

This noise increases exponentially with standard-def sources, which also suffer a few rogue colour tones, more skin tone 'blocking' and a generally rather soft, imprecise look.

While the set sounds like a great value big-screen gaming monitor, its potential is destroyed by a measured input lag of 100ms. This delay could cause you significant game performance issues.

Unexpectedly, after its various significant picture problems, the 50PW450T produces a good audio performance. There's a surprising amount of bass to add power and authenticity to action scenes, yet the mid-range and treble parts of the spectrum seldom sound overwhelmed or cramped.

For all its flaws, the 50PW450T will find an audience. After all, it's so cheap that it still looks decent value for a standard 2D 50in TV, especially once you've taken into account its respectable HD picture performance. If you're keen on 3D and/or gaming, though, the 50PW450T shouldn't be touched with a bargepole

Does the job: Not the most stylish-looking handset, but the layout is logical

Tech Labs

Power consumption: Watts



White screen: Our 100IRE test shows LG's plasma to be power-hungry, but energy-saving modes do make a difference



Test footage: With movie footage, average consumption doesn't drop that much lower either

Contrast: ratio



Picture: An out of the box contrast figure of 459:1 shows up the hyperbole of LG's own figures, and we couldn't nudge it much higher after calibration. Luminance was 17.4fL

Colour temp: Kelvin



Presets: Adjustment tools enabled us to achieve 6,500K, but the Cinema preset is good
Vivid: 10,700K
Standard: 9,100K
Cinema: 6,300K
Game: 8,700K

HCC VERDICT

LG 50PW450T
£700 Approx

Highs: Great value; includes a pair of active shutter glasses; sounds good; calibration flexibility

Lows: 3D pictures destroyed by crosstalk; not a Full HD panel

Performance: 1 **2** 3 4 5

Design: 1 2 **3** 4 5

Features: 1 2 3 **4** 5

Overall: 1 2 **3** 4 5

A force to be reckoned with?

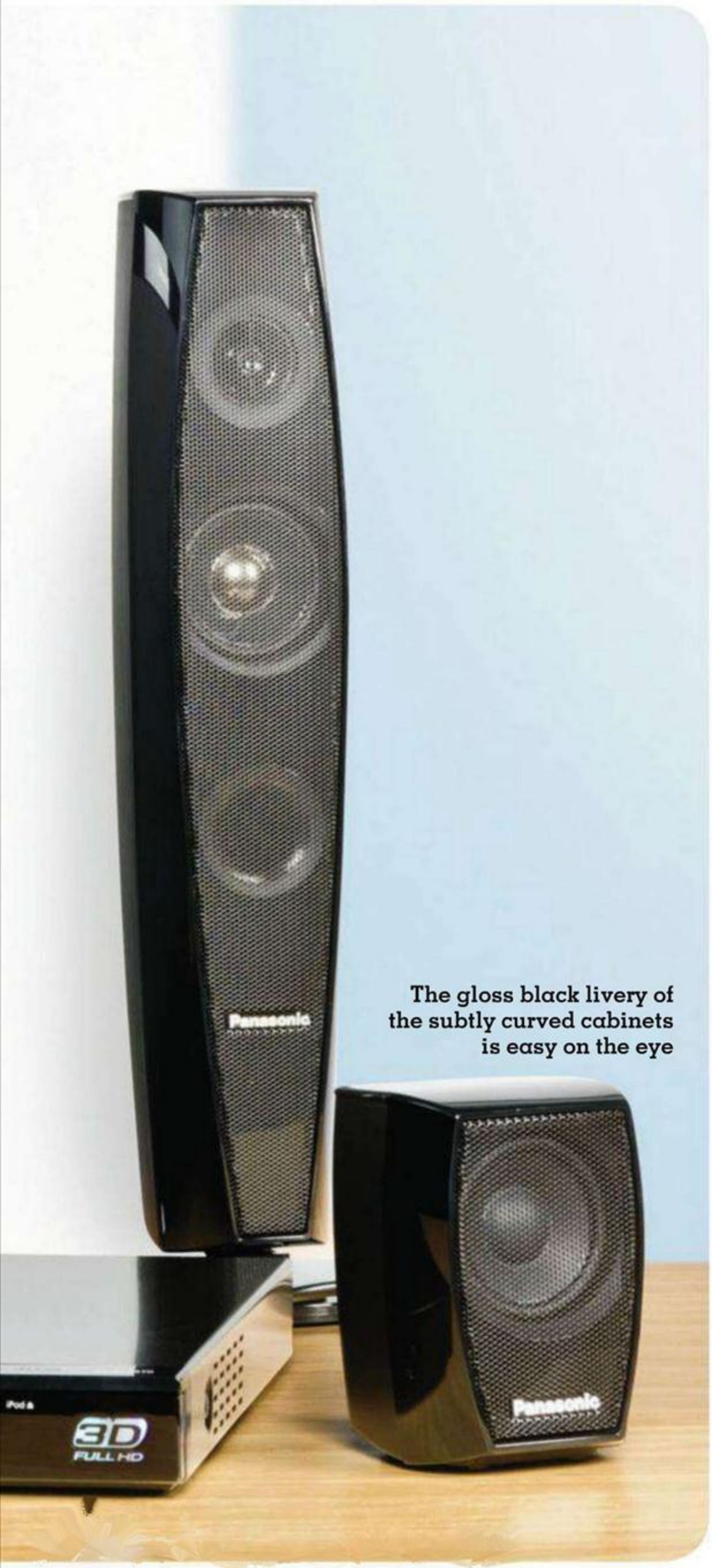
AV/CV

PRODUCT:
Compact 5.1 3D Blu-ray system

POSITION:
One of seven SC-BTT packages

PEERS:
Sony BDV-E380; LG HX806SG; Samsung HT-D5100

A long, long time ago in a demo room far, far away, **Mark Craven** auditioned Panasonic's latest 3D Blu-ray home cinema. Is it the one-box system he's been looking for?



The gloss black livery of the subtly curved cabinets is easy on the eye

All-in-one systems are often people's first experience of home cinema and the market shows no sign of disappearing. Panasonic now offers an extensive range of packages in various sizes, but so are its Samsung, Sony and LG rivals, so it needs to make sure its systems stand out from the crowd.

The SC-BTT370 reviewed here certainly gets a leg up over the competition, thanks to the exclusive deal with 20th Century Fox, which enables buyers to claim a copy of the *Star Wars Original Trilogy* Blu-ray box set (see below right for more).

Other key selling points of the SC-BTT370 are its Skype functions, (requiring the separate purchase of Panasonic's Communication Camera), 3D BD playback (and 2D-3D conversion), built-in wi-fi and its Smart features.

Low-key appeal

The system comprises a main unit, a pair of 40cm-high, two-way front left/right speakers, three smaller satellites and a subwoofer. The whole ensemble is black, but there are subtle curves on the cabinets and the BD player/amplifier unit is sleek and discreet. Nothing should jar too much with your decor.

Getting it set up and wired in isn't much of a chore. Only the front left and right speakers come with stands, and these connect via one solitary screw. Wiring is made easier by colour-coded terminals.

The build quality is impressive for the money. Each speaker is reasonably weighty, and **it's a pleasure to deal with cabinets that don't threaten to fall over when somebody sneezes**. Tallboy systems may be easier to place in your room (you don't have to perch the L/R enclosures on your TV stand, as I did) but their stability often leaves a lot to be desired.

The main unit offers enough connections for most situations. The HDMI output supports the Audio Return Channel, so can provide a one-cable solution for your TV's sonics. There's also an optical digital input. Best of all is the presence of two HDMI inputs, which enabled me to run both my Virgin TiVo box and my PS3 through the unit. Standby Pass Through also allows signals to feed to your TV when the system is switched off.

There's also an Ethernet jack on the rear, should you not have a wireless network.

After adjusting speaker levels in a sub-section of the set-up menu (some may prefer to stick to the Heavy, Soft, Flat and Clear presets), in went the *Sucker Punch* Blu-ray and it was time to play...

This fantasy fight-fest offers an awesome DTS-HD 5.1 mix and the SC-BTT370 delivers it well. The LCR speakers perform admirably, with a bright, airy and spacious tone and clear dialogue. There's a lack of mid-range presence, but I don't expect everything from a £350 system.

The downward-firing subwoofer isn't fussy about placement and, after ramping up its output a tad from its default setting, it underpins the soundstage with some authority. When a giant dragon attacks a helicopter in Chapter 8 (it's that kind of movie) the sub spat out a lovely, low-level growl that enveloped my room. Meanwhile, the dinky surround speakers ensured the onscreen mayhem was immersive.

Pleasingly, the SC-BTT370 doesn't mind playing loud either. I reached my own volume tolerance level with some way to go before I hit the system's volume buffer, and it's easy to find a good level of wallop without distortion settling in.

The system's commendable surround performance is matched by a picture that is hard to fault. The multi-coloured pastel tones of *Sucker Punch* ooze off the screen >

Box set blag

Get the original Star Wars trilogy on BD



Not satisfied with tying up the *Avatar 3D* Blu-ray deal, Panasonic has now inked an agreement with 20th Century Fox to let buyers of some of its BD products claim a copy of the *Star Wars Trilogy IV-V-VI* Blu-ray set. The deal doesn't give Panasonic exclusivity – you can still pick up the Blu-rays on the high street – but as an incentive to choose a Panasonic product over one of its competitors, it's a good one.

Buyers of the DMP-BDT110, DMP-BDT210, DMP-BDT310, DMR-PWT500, DMR-BWT700, DMR-BWT800, SC-BTT262, SC-BTT362, SC-BTT270, SC-BTT370, SC-BTT775 and SC-BFT800 products can mail away for a copy of the box set. Visit www.panasonic.co.uk for information.



→ Specifications

3D playback: *YES* plus 2D-3D conversion
Video upscaling: *YES* to 1080p
Multi-region: *NO* R2 DVD and Region B Blu-ray
HDMI: *YES* 2-in, 1-out
Component video: *NO*
Digital audio: *YES* 1 x optical input
Dolby TrueHD/DTS-HD MA decoding: *YES/YES*
Dolby TrueHD/DTS-HD MA bitstream: *YES/YES*
Profile 2.0: *YES* requires additional storage for for BD-Live
Total amplification (claimed): 1,000W
Dimensions (main unit): 430(w) x 38(h) x 279(d)mm
Weight (main unit): 2.7kg
Features: FM radio; DLNA; Ethernet, VieraCast online portal; SD card slot; 2 x USB (one rear for Skype camera); built-in wi-fi; iPod dock; Flat, Heavy, Clear and Soft sound presets

and detail is coaxed out from every object. Meanwhile, *Avatar*'s 3D tomfoolery snuck down my HDMI connection unscathed.

Home help

Away from its core AV duties, the SC-BTT370 doubles as a nifty little home hub, offering FM radio, DLNA media streaming, file playback from USB and SD card, iPod connection and access to Panasonic's VieraCast online platform.

Having a Smart portal is always a welcome bonus, but VieraCast is rapidly being left behind by the offerings of Samsung, Philips, LG and Sony. Even Panasonic's own more advanced VieraConnect platform, which it specs for its TVs, is superior in scope. VieraCast's services include Twitter, Picasa, Acetrax, YouTube, Dailymotion and various news feeds, but there's no sign of BBC iPlayer and these days that's almost a crime.

At least the VieraCast UI is easy to navigate, with large, colourful icons denoting what's on offer.

As a media player, the provision of both USB and SD card inputs is welcome. These are located behind a flap on the front panel. Video file support from USB includes AVI and MKV, while the SD slot will handle the AVCHD and JPEGs from your camcorder. To browse your plugged-in media you select either Photo,

Neat idea: A drawer pulls out to create a discreet iPod dock on the front

Familiar: Once you've seen one Panasonic remote, you've seen them all



JPEG thumbnails are provided and you can search for 3D images only, if you have any. Media streaming from your network is done from a separate area of the UI.

The iPod connection is a nice touch, as it's hidden away in a slide-out draw on the front fascia. This means it shouldn't get damaged by inquisitive toddlers. The FM radio is less of a boon. It requires a black wire antenna and resulted in nothing more than white noise. That's exactly the same effect I get from the radio in my AVR, of course, so maybe my house is to blame. I'd advise sticking to your DAB, internet radio, or Freeview/Sky/Virgin platform for your FM needs.

Flawed hero

Panasonic's SC-BTT370 is an appealing all-in-one system that would suit a living room setup. Its AV performance is excellent considering its price tag, and features such as built-in wi-fi (which worked without a hitch) and plug'n'play iPod compatibility are useful. Build quality is reassuring and the styling suits me fine. My only real gripes are the lacklustre VieraCast service, no provision for wireless rear speakers, and that making adjustments to the picture and sound menus caused the BD to play from the very beginning. Maybe I was doing something wrong



HCC VERDICT

Panasonic SC-BTT370
Approx £350

Highs: Picture and sound performance; built-in wi-fi: media playback
Lows: Wired rear speakers; VieraCast portal isn't class-leading

Performance: 1 2 3 **4** 5
Design: 1 2 3 **4** 5
Features: 1 2 3 **4** 5
Overall: 1 2 3 **4** 5

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Chocks away for Spitfire take off

AV/CV

PRODUCT: Part of a range of 28 skinny speakers, made to work from behind canvas

POSITION: The reference quality flagship, yet voiced such that the smaller products can blend in with them, as here

PEERS: [illegible]age Audio: [illegible]oe







HOME CINEMA Choice *Reference Status*



Artcoustic's range also inclu[des] soundbar-style [speakers] for flatscreen TV

Adam Rayner critiques a set of high-end speakers with an artistic flourish

As a reviewer for *HCC*, I get sent some lovely speakers, but there is one kind I cannot test at my house. These are the sort that get built into people's homes, either in-wall, on-wall or in-ceiling.

Plenty of brands are getting involved in this market – Bowers & Wilkins, Pioneer, Tannoy, KEF, etc – but none have quite captured the attention of the custom install market (when people often want speakers that sound great but don't dominate a room) as much as the Danish company Artcoustic.

In my experience reviewing home systems, as well as in-car systems, in-wall and in-ceiling models are compromised by not being properly enclosed to their rears. They may be made to cope with bumping against nothing but a ceiling void, (often called 'free air'), but they never sound as good as well-enclosed drivers, snugly boxed into a bit of woodwork. On-wall speakers, however, with a dedicated cabinet, ought to sound better, but you have to make them thin to still serve their stealth purpose.

For years now, I have been aware of the existence of speakers made to look like picture frames, but as I had only seen a weedy pair on the wall at a local dealership, I had imagined that they were all about the cute pictures you could put on the front and were a full-on sad compromise.

But after reviewing the Image Audio picture panel speakers in *HCC* #195 (a system of intense, Morel-driven beauty and great accuracy), I was keen to sample the wares of Artcoustic – the very brand which I had seen at the local dealer's.

I intended to be even-handed about them if they were all about a brave compromise that got some sound out into the room. The last thing I expected was to find a speaker system with no fewer than 42 10in drivers in it, powerful enough to shake the luxury Front Row seating I had been sat in, just as if there were butt-shaking, tactile transducers bolted to their undersides. I knew straight away that this was going to be fun...

Got it covered

Artcoustic is at the end of a very rugged research curve for its screen fabric and its printing. I recall another speaker system called that I went to see in Paris. You bought the screen with a skinny enclosure system behind it. Patrice Congard, the chap I'd visited, was at a show a few years later, and was now specialising in the marvellous screen fabric he had sourced, as it turns out to be the toughest thing to get done well. There really is no such thing as acoustically transparent, and the THX standard allows for a 1.5dB uplift in the high frequencies for when the speakers are behind the screen fabric, and even give screens their THX rating.

But while Artcoustic is a brand often found in posh homes, and the design house that Artcoustic is in bed sells wallpaper for up to £300 a roll, it's keen to stress that the Art side was just part of the story, and that the €40,000 printing machine it uses can apply a deep rich colour palette to the speaker cover without significantly impacting their performance.

The crew at Artcoustic install different levels of system into their showroom cinema from time to time, as they tend to have customers come along to audition whole systems. As such, they set up a mid-price one and then a next level one, and so on. I gather the system I auditioned was only part way up the lunacy ladder. >



Countdown: The Spitfire 4.2.1s combine four bass drivers, two mid-rangers and a tweeter

At the front we had three of the Artcoustic Spitfire 4.2.1s, so named as they have four 10in bass drivers, another two of the same driver crossed over to act as midbass, and a pro-audio horn-loaded high-frequency compression driver in the middle.

Each was paired to its very own Spitfire sub, which now uses two of Artcoustic's own design of bass driver. There used to be four Peerless drivers in this box, but it is now claimed to be louder with just two of the company's own. I asked about the tech but they were reluctant to discuss it. It seems the research needed to make subwoofer speakers work well in a low cubic capacity environment is commercially sensitive stuff.

It's also something the car audio boys have wrestled with for years. There are lots of less-than-a-cubic-foot 12in speakers and many squashed-flat designs out there for motor use. I can only imagine (not being allowed to dismantle anything with my Swiss Army penknife) quite what the Spitfire sub's drivers look like.

There were another two of the subwoofer enclosures at the back of the room to support the side and rear-channel cabinets, which were respectively the Spitfire Monitors and the Diablo models. The Spitfire Monitors are also very skinny and shallow, have two more 10in drivers in each, as well as a pair of very high output, high-quality Ring Radiator tweeters. **These can reach a bat-like 40kHz and really cut the mustard**.

At the rears, we had the Diablo Monitors, which combine a single 5.5in driver with another panel of paired Ring Radiator tweeters. So, [illegible] up, the '.1' channel is represented by a quintet of subwoofers.

Like Jeremy Clarkson when he got the Bentley, I just had to give this Spitfire array a pull through, so I decided that I would take it up to a level that the Artcoustic rep had not used in the room before. Thankfully, it turned out that the speaker system, which was so very unobtrusive that it left no footprint in the room at all, was able to shake the place so hard it was scary.

The rest of the system was equally high-end, with an Anthem preamp, power amps and a projector and media server to show the action. I had them play me a clip I know to death and found that, while it was powerful, accurate and great fun, it did suffer a little from the difference between the tweeters. The horns can go very loud but only to 18kHz, which does preclude the tinkly delicacy and rarity that the Ring-Radiator tweeters can muster, from taking precedence perceptually. This means a slight lack of that premium hi-fi feel you might get from around £20,000 of standalone speakers with matching high technology tweeters.

But placement of sounds was still excellent and, in fact, the slight hardness I detected was probably no more than my driving it all too much and hitting the limits of the amp's sweetness.

No compromise

Capable of an awesome performance, this system is not a compromise. If you want your speakers seriously potent, lovely sounding, and utterly hidden, then visiting an Artcoustic showroom should be on your to do list. And while you're having your ears blown off, your partner can choose the pretty pictures

→ Specifications

Artcoustic Spitfire 4.2.1 L/C/R

Drive Units: 4 x 10in Peerless bass drivers with an extra pair of the same driver crossed to play midbass only; 1 x horn-loaded tweeter
Enclosure: 3-way, sealed
Frequency Response: 20Hz- 18kHz +/-3dB
Sensitivity: 99dB
Power handling: 250W
Dimensions: 800(w) x 840(h) x 186(d)mm
Weight: 48kg

Artcoustic Spitfire Monitor side speakers

Drive Unit: 2 x 10in Peerless midbass drivers; 2 x ring-radiator tweeters
Enclosure: 2-way sealed
Frequency Response: 30Hz-40kHz
Sensitivity: 95dB
Power handling: 250W
Dimensions: 500(w) x 500(h) x 150(d)mm
Weight: 4.4kg

Artcoustic Diablo Monitor rears

Drive Units: 1 x 5.5in Peerless midbass driver; 2 x ring-radiator tweeters
Enclosure: 2-way sealed
Frequency Response: 45Hz-40kHz
Sensitivity: 93dB (2.83V @ 1m)
Power Handling: 150W
Dimensions: 270(w) x 330(h) x 73(d)mm
Weight: 15kg

Artcoustic Spitfire Sub (5 used)

Drive Unit: 2 x 10in woofers of proprietary Artcoustic design, optimised for low frequencies in low cubic capacity enclosures
Enclosure: Sealed, dual driver
Frequency Response: 20Hz-120Hz
Power Handling (passive subwoofer): 250W RMS
Dimensions: 500(w) x 840(h) x 186(d)mm
Weight: 30kg



HCC VERDICT

Artcoustic Spitfire Series
Approx £21,500

Highs: Stealthy profiles and bespoke finishes; full-range, accurate sonics
Lows: Might benefit from matched tweeters; offers a little less resolution and staging than from traditional enclosures at the price

Performance: 1 2 3 4 **5**
Design: 1 2 3 4 **5**
Features: 1 2 3 **4** 5
Overall: 1 2 3 4 **5**

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LG D2342P 3D MONITOR → £240 APPROX → www.lge.co.uk

Low cost 3D migrates to PC

LG's first Cinema 3D passive screen should fit the bill, says **Steve May**

This 23in LED backlight display has an FPR (Film Pattern Retarder) filter, which means it can be used with low-cost, passive 3D glasses that appear flicker-free. This is important considering most PC monitors are used in environments with a high level of ambient light, usually from a multitude of different sources. What's more, the loss of 3D resolution characteristic of an FPR screen matters far less here than on a large screen TV, because it's harder to perceive.

The screen looks much like any other widescreen PC monitor. It has a thin, glossy black bezel and is just 5.7cm deep (although it bulges at the rear). There are no speakers, but you do get a headphone jack.



Affordable: Flicker-free, passive 3D option

This PC Cinema 3D screen works rather well. *Tron: Legacy* is a challenging 3D Blu-ray, yet this LG does a grand job of giving it depth. The caveat is that there is a very narrow sweet spot available to enjoy crosstalk free 3D. Move off axis, particularly vertically, and double imaging spills across the picture.

Highs

- The D2342P may lack a TV tuner, but it does sport an HDMI input, as well as PC D-Sub and DVI-D inputs, making it easy to use with 3D Blu-ray players and games consoles.
- The passive 3D glasses used with this set are lightweight and comfortable. LG includes a pair of polarising clip-ons for spectacle wearers. These can literally be pinched onto any regular prescription glasses.

Lows

- The D2342P's panel has a static resolution of 1080 lines, but its motion resolution is rather less, topping out at around 650 lines. There's no fast frame-rate tech on board to cure this subjective drop. That said, blur wasn't deemed a problem during gaming sessions.
- Greyscale tracking is not a strong suite and the screen struggles to deliver a rich, deep black level.

HCC VERDICT

LG D2342P Cinema 3D monitor
£240 Approx

Overall: 1 2 3 **4** 5

Q2 INTERNET RADIO → £90 APPROX → www.q2radio.co.uk

Don't be a square, be a cube

Is this the world's most original radio? **Martin Pipe** thinks so

The Q2 brings the content-rich world of internet radio into your home with style. And because this button-free 10cm cube incorporates a rechargeable Li-ion battery you can take it outside, too – as long as your wi-fi coverage matches your territorial ambitions.



Highs

- Easy to use, thanks to an accelerometer similar to that built into the Wii controller. Placing the cube onto one of four sides selects a different station. Tilting the radio up or down adjusts volume, while the face-down position shuts it up. And from a single charge, you can expect to get over 10 hours of moderate-level listening.
- No physical buttons to trap dust or malfunction. The only switch, on the rear panel, turns the thing off altogether. Alongside this are a small bass-reflex port and an earphone socket. Behind the speaker grille lurk LEDs showing power and connection.
- Sound quality is great for the size. The Q2 goes far louder than expected, without unacceptable levels of distortion. Its speaker's range is unexpectedly wide, too.
- If you don't like the swirly floral motif decorating our review sample, there's a choice of other patterns and styles available including plain white, black, or green, and a floral pink. Lovely.

Lows

- You only get an immediate choice of four stations or podcasts from a choice of thousands. To change them, you have to plug the Q2 into a computer via its USB port, and use downloadable software to assign new stations to these 'presets'.

HCC VERDICT

Q2 internet radio
£90 Approx

Overall: 1 2 3 **4** 5

In Brief

Deus Ex: Human Revolution
Square Enix, £50Approx



Dystopian futures are ten-a-penny in videogames. But nothing does them as well as the *Deus Ex* series – a fact hammered home by this superb third outing, which mixes role-playing, stealth and shooter elements into an electrifying whole. It'll keep you coming back for more

1 2 3 4 **5**

Terrestrial TV on the move

Chris Jenkins tests a tiny mobile TV tuner and tries to get a signal...

Elgato is flagging up the Tivizen – a mobile TV tuner for terrestrial digital signals – as a way you can turn your Apple iPad into a TV. It can also be used with iPhones and Windows 7 PC and Apple laptops, sending a TV signal by wi-fi to compatible devices.

About the size of an MP3 player, with a removeable Li-Ion battery (3.5hrs of power), the device features a telescopic aerial and a USB port concealed under a flap (a cable is included). To activate, you have to download and install software for your device, then enter a 26-digit key, which seems a bit unnecessary.

Once charged, the Tivizen can join your portable device to its wi-fi network, or have it join an existing network if you don't want to interrupt your internet connection. You then run the EyeTV3 app to access TV functions and the picture appears, as if by magic, on your portable device. The app has useful recording, live pause and time-shifting functions.



Highs

- A neat, compact and clever unit which (given a good signal) does just as promised, and is particularly valuable to owners of original iPads that don't have a USB connector.
- Can also be used as a conventional USB TV tuner, when you're already using a public wi-fi network.

Lows

- Restricted by the tiny aerial. You'll be very lucky to get clear reception in built-up areas and there's no option to plug in a larger external aerial.
- Doesn't support HD.
- The USB port cover will snap off.
- Installing the software is an unnecessarily fiddly process.
- Compared to a straightforward USB TV tuner it's very expensive.



Neat idea: Should please iPad and iPhone owners

HCC VERDICT

Elgato Tivizen
£150 Approx

Overall: 1 2 **3** 4 5

TEUFEL MEDIASTATION 6 → £270 Approx → www.teufelaudio.co.uk

Sturdy as an alien tank

Chris Jenkins assesses a media player with a nationality crisis

Teufel's MediaStation 6 is huge, heavy and highly specified versus its rivals. The sturdy box is about half the size of a standard DVD player and features a built-in TV tuner and 1TB hard-drive recorder. On the back are HDMI, component video out, composite video/stereo audio in/out, RF in/OUT, optical and coaxial digital audio out, and LAN sockets. Power is from an external supply, and there are two USB Host and one USB Device sockets on the side, plus an SD card slot. If you opt for the wi-fi version, a dongle is supplied.



While there are some useful time-shifting and pause-and-rewind tools, there's only a single tuner and it's standard-def. The operating system isn't too smart; while you're recording, you can't browse other channels, and the program guide shows you only a single channel at a time. Timer programming doesn't offer a simple way to resolve programme clashes, and recordings are saved in folders by channel, not by title. Meanwhile, Red Button functions aren't supported.

Internet functions including YouTube, Picasa, Flickr, Youku, Weather and News are supported, but there are no UK catch-up TV services, and the Shoutcast internet radio option is poor on UK stations.

Media playback functions, though, are excellent, with comprehensive file support and superb play quality, while providing a useful BitTorrent client function.

Highs

- It's well built, with good connections and file support – and playback quality is superb.
- Comes with a bundle of cables, huge remote control and stick aerial.

Lows

- This seems like a product designed for the German market which hasn't been properly configured for the UK broadcasting environment.

HCC VERDICT

Teufel Media Station 6
£270 Approx

Overall: 1 **2** 3 4 5

In Brief

Teletext Holidays App
Samsung Smart TV, £Free

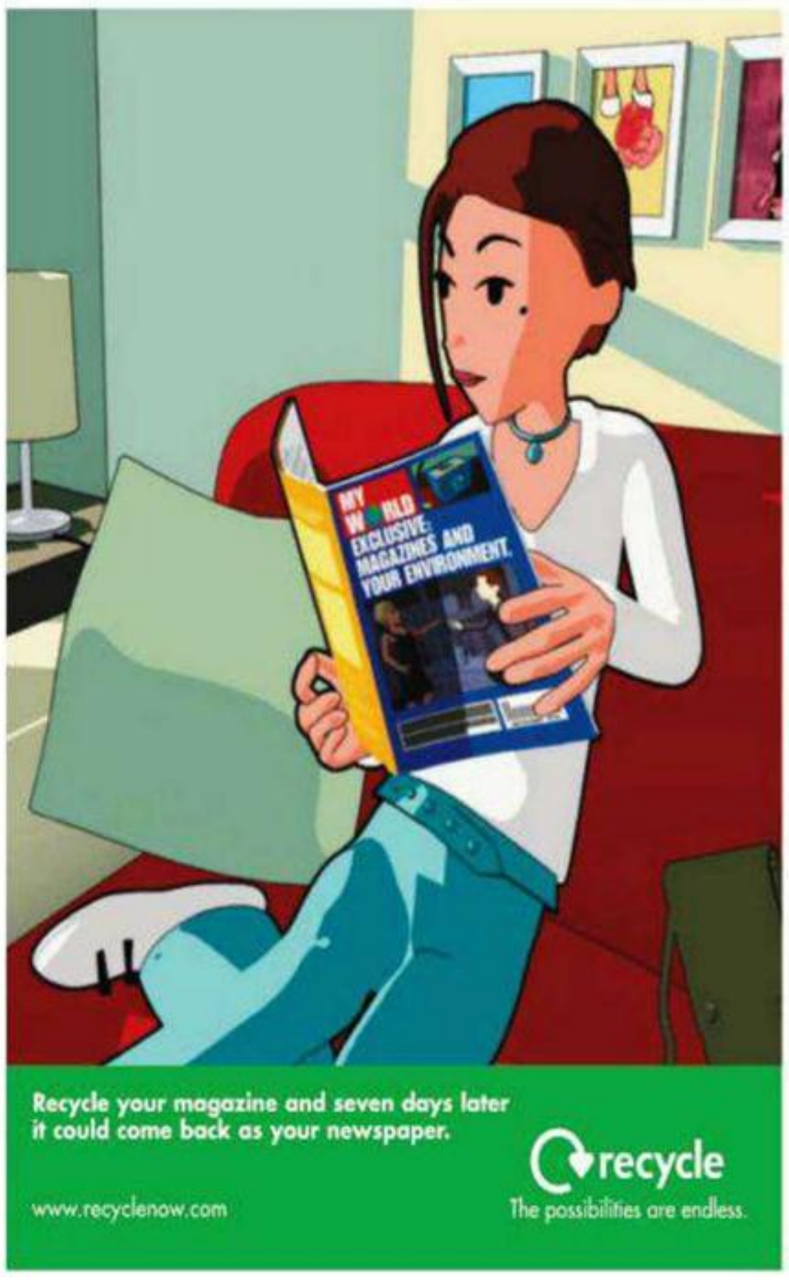


New to Samsung's Smart TV App store is this slick search engine from Teletext Holidays. With its video-based destination guides and simple controls it aims to take the stress out of choosing your trip abroad – and on the whole it works, though you'll still need to pick up the phone to book your trip

1 2 3 **4** 5

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> "..the majority of home cinema systems selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level."

Choosing a home cinema system is a potential minefield that must be negotiated with great care or safely avoided by letting experts guide you. If you want to end up with a system that, as a minimum, meets your expectations in terms of picture and sound quality, reading magazine product reviews and choosing the recommendations, five-star favourites or best buys can only ever be part of the answer at best. Looking for the cheapest price and having a system delivered to your door, even with a 'knowledgeable' friend to help set it up, is a well-trodden path to disappointment.

There is a bewildering choice of components on the market today and also different ways in which components can be installed and connected together. Which sort of visual system do you go for? Projector and screen, or plasma, LCD or LED TV? 3D or non-3D? Full 1080p capability is now the only sensible choice but the appropriate source components, such as a Blu-ray player, need to be part of the equation. The sound performance of a system is also hugely [illegible] even more so if you will be [illegible]

the same system. If so, you need an amp that approaches the performance of a decent 2-channel hi-fi amp, which is not that easy to find. Having an amp with the right inputs for the best connectivity is essential but you will also need to decide on a 5.1 or 7.1 speaker system, passive or active sub and, crucially, where they will be sited for the best results. In short, it's complicated and very fertile ground for getting it wrong.

ACHIEVING POTENTIAL

To select a system, you could choose a collection of 'Best Buy' components in the hope that they will be a great combination. Maybe, but probably not. You could buy a pre-packaged all-in-one system from one manufacturer. This is almost certainly not the best route either as you will miss out on enormous potential. From informal surveys conducted, it appears highly likely that **the majority of home cinema systems selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level.** To compound matters, most are also ill-matched to the room in which they are installed and are, in reality, the wrong system. Without considerable knowledge or experience, high quality home cinema is not a suitable DIY activity.

Our aim must be to buy a home cinema system that will provide an excellent picture quality plus an audio delivery that will match, or even better, the commercial cinema experience. It must be exciting, reliable and deliver true value for money.

WHAT AND WHERE TO BUY

To ensure a home cinema system is right for you, where do you start? Here's an important tip ...**don't** start with **WHAT**, start with **WHERE**. There's only one way to give yourself the best chance of getting it right first time, and that's through a specialist AV dealer. It's possible you have preconceived ideas that put you off visiting one. Although you would welcome the advice and guidance, you don't know the technical jargon. You don't want to be talked down to. Your friend has said they only sell expensive gear and they're not interested if you don't have a big budget. They're expensive. These are just myths.

Most specialist AV dealers are running their business because, above all, home cinema is their hobby. They spend a large portion of their time comparing systems to get the best possible results. They know the component combinations which don't gel together and, conversely, they know the combinations which give the best performance within a given price range. Very importantly, they know how to get a system working to its optimum. But they all also know the system must suit **you**.

GUIDE
TO BUYING HOME CINEMA

LISTED BELOW ARE 20 OF THE BEST AV SHOPS IN THE COUNTRY.

They have been selected because they are known to do an excellent job in guiding customers towards home cinema systems that will provide years of superlative performance and total satisfaction.

BUYING OR BEING SOLD TO?

There are dealers around, web based or otherwise, who will sell you anything you are willing to pay for. They may be a bit cheaper but that's all they offer. Now there's a carefully selected group of long-established specialist dealers who are totally committed to putting the customer first. Their idea of 'selling' is to discuss your requirements, offer their advice, give you the best options, then play the systems for you and allow you to be the judge. You'll probably be surprised and, almost certainly, relieved to discover how easy it is to see and hear the differences between components and between systems. You'll be able to make a clear and informed decision about what to buy.

The story doesn't end there. These shops won't abandon you once you've put your hand in your pocket. They won't leave you to set up the system you've selected as best you can. They'll install it in your home, make sure it performs to its best, and ensure you're entirely happy with the way it works. Why? Because a high proportion of these dealers' custom comes through people who have bought from them before, either directly or by recommendation. It's vital to them to get it right for you.

GETTING THE BEST DEAL

Unless you've got money to burn, you'll be living with your new system for years. Most of these dealers offer much longer equipment guarantees than provided by the manufacturer, a very worthwhile benefit, but it also makes it in the dealer's interest to ensure high build quality and reliability. Maybe you could save a few pounds by buying piecemeal but you'll lose out on the overall package. As far as the dealers are concerned, they believe that taking care of their customers properly is a far better way [illegible] business than just handing o[illegible] [illegible]es.

OUR TOP 20 UK SPECIALIST AV DEALERS

SOUTH

Chelmsford RAYLEIGH HI-FI SOUND & VISION
216 Moulsham Street. 01245 265245
www.rayleighhifi.com

Colchester RAYLEIGH HI-FI SOUND & VISION
33 Sir Isaac's Walk. 01206 577682
www.rayleighhifi.com

Kingston-upon-Thames INFIDELITY
9 High Street, Hampton Wick.
020 8943 3530
www.infidelity.co.uk

Maidenhead AUDIO VENUE
36 Queen Street. 01628 633995
www.audiovenue.com

Rayleigh, Essex RAYLEIGH HI-FI SOUND & VISION
44a High Street. 01268 779762
Custom Install Dept.
01268 776932
www.rayleighhifi.com

Southend-on-Sea RAYLEIGH HI-FI SOUND & VISION
132/4 London Road. 01702 435255
www.rayleighhifi.com

Tunbridge Wells KENT HOME CINEMA
69 London Road, Southborough.
01892 535007
www.kenthomecinema.co.uk

LONDON

Ealing AUDIO VENUE
27 Bond Street. 020 8567 8703
www.audiovenue.com

N1 GRAHAMS HI-FI
190a New North Road. 020 7226 5500
www.grahams.co.uk

SW11 ORANGES & LEMONS
61-63 Webbs Road, Battersea.
020 7924 2040
www.oandlhifi.co.uk

MIDLANDS

Coventry FRANK HARVEY HI-FI EXCELLENCE
163 Spon Street. 024 7652 5200
www.frankharvey.co.uk

Nottingham CASTLE SOUND & VISION
48/50 Maid Marian Way. 0115 9584404
www.castlesoundvision.com

Solihull MUSIC MATTERS
93-95 Hobs Moat Road. 0121 742 0254
www.musicmatters.co.uk

NORTH

Chester ACOUSTICA
17 Hoole Road. 01244 344227
www.acoustica.co.uk

York SOUND ORGANISATION
2 Gillygate. 01904 627108
www.soundorg.co.uk

SCOTLAND

Aberdeen HOLBURN HI-FI
441 Holburn Street. 01224 585713/572729
www.holburnhifi.co.uk

Glasgow GLASGOW AUDIO
135 Great Western Road.
0141 332 2200/4707
www.glasgowaudio.com

CEDIA® BADA

The majority of the above dealers are members of one or both of the major trade organisations, BADA or CEDIA.

STAR QUALITIES

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SERVICE	★ ★ ★ ★ ★
FACILITIES	★ ★ ★ ★ ★
VERDICT	★ ★ ★ ★ ★

TOP 20 UK SPECIALIST HOME ENTERTAINMENT DEALERS

QUALITY ASSURED ★ ★ ★ ★ ★

Budget blitz

With more and more of us finding less and less in our wallets, we rustled up a posse of value-minded 40-42in TVs.

John Archer runs his eye over five popular models



LG
42LV450U
£530 Approx
LG's 42in LED contender lacks a built-in Freeview HD tuner, so you'll need to partner it with a set-top box to get broadcast HD

SAMSUNG
UE40D5520
£600 Approx
A Series 5 LED set from Samsung that offers a slice, but not all, of the brand's connected TV platform

THE TEST

Trying to scrape together enough cash to acquire an upgrade for your telly can be a daunting prospect. In fact, while every economist with the guts to offer up an opinion is predicting that things are only going to get worse before they get better, it seems likely that the affordable end of the TV market is going to be where the action's at for many months, or even years, to come.

The upshot to this situation is that the big AV brands are falling over themselves to get their hands on a share of this penny-pinching buck, bringing about an ultra-competitive market. This in turn is leading to TVs which sport far superior features and quality being sold for lowly prices.

To prove the point, we've rounded up five 40-42in TVs from the biggest manufacturers that all cost £600 or less – yet all also offer such 'step up' features as edge LED lighting, Smart TV functionality, or even, in one case, both. Read on to find out which one is most deserving of your hard-earned cash.

As usual, all five screens were tested by *HCC* in both a domestic environment and in our Tech Labs, the latter adding some scientific data to support our subjective findings.

TOSHIBA 42HL833

£500 Approx

Toshiba's set eschews Smart TV functions, so will have to rely on its AV performance to stand out from the crowd

SONY KDL-40CX523

£550 Approx

This chunky 40 incher from Sony uses old-school CCFL backlighting – so how will it fare against its slimmer LED rivals?

PANASONIC TX-L42E3B

£600 Approx

While Panasonic is best known for its high-performance plasmas, it now makes LED sets at the 42in mark, too

The odd one out

While LG usually fares well for value, the 42LV450U is strangely off the pace



→ Tech Labs

Power consumption: Watts



White screen: The LG used 109W with our 100IRE test pattern. Energy Saving mode reduces it considerably



Test footage: Average consumption with movie playback measured a more eco-friendly 77W

TV contrast: ratio



Picture: Despite claiming a 4,000,000:1 contrast, we measured a much lower ratio of 493:1 in Standard picture mode, but with a good luminance of 74.1fL. Vivid modes ups the contrast to 883:1

Colour temp: Kelvin



Presets: Of the presets, Cinema mode delivered the most accurate colour temperature
Vivid: 14,300K
Standard: 9,700K
Cinema: 7,000K
Sport: 11,200K
Game: 9,600K

This classy-looking, slender set joins the many other TVs in this group test that have edge LED lighting. It's nice to find, too, that there's a USB port available for playing back photo, music and video (including DivX HD) files from USB storage devices.

But this is basically where the interesting specs end. There's no Freeview HD tuner, something LG has always been quick to introduce further down its TV range. There's no sign of any of LG's Smart TV online services, either. Indeed, there isn't even a LAN port to access the internet or files stored on DLNA PCs.

Unfortunately for LG, these missed out features are going to crop up fairly regularly elsewhere in this group test...

The 42LV450U does retain the impressively logical and well presented onscreen menus found further up LG's range.

It also retains the endorsement of the Imaging Science Foundation, meaning that this independent calibration organisation believes the 42LV450U has enough tools to allow [illegible] include colour and gamma management. However, I don't really understand LG's logic here. Surely the mass-market audience the 42LV450U is aimed at would prefer a Freeview HD tuner or some Smart TV functions, rather than professional calibration features they won't use?

Pure light

Thankfully, the 42LV450U starts to make a compelling case for itself with its picture performance. Predominantly bright HD scenes, such as those on the recent Blu-ray release of *The Incredibles*, look really sumptuous, with plenty of detail and crispness, rich and dynamic colours, and a startling level of raw light output for such a cheap set. Motion causes respectably little judder or blur, and colours can be made pleasingly believable in tone after only a little work in the colour management system.

However, while the 42LV450U thrives with bright HD, it isn't nearly as fond of either dark or standard-def material. The nighttime scenes in Venice on the recently release *Don't Look Now* Blu-ray betray a marked lack of black level depth versus most of its rivals, with blacks looking grey and shadow detail in short supply. Nudging down the set's backlight and brightness settings can reduce the grey 'pall', but to overcome it you have to go so dark that images start to look dull and devoid of shadow details.

Basic buttons: This simple remote reflects the LG's lack of features



As for standard definition, while the 42LV450U doesn't lose colour accuracy with broadcasts, it's less successful at upscaling them to the screen's full HD resolution, leaving them looking soft and noisy.

Joining the hit and miss visuals is a similarly inconsistent audio performance. On the upside, trebles are portrayed with almost scary clarity and the mid-range is reasonably open. Predictably, though, the trade-off is a lack of bass to counterpoint the high-range sounds, amounting to a 'lopsided' and harsh soundstage.

Overall, the 42LV450U feels a bit lost and pointless even within LG's own range, given that you can get the far better specified 42LV550T for only a fraction more money.

Back to basics

Panasonic fails to keep up with the budget TV Joneses on features



→ Tech Labs

Power consumption: Watts

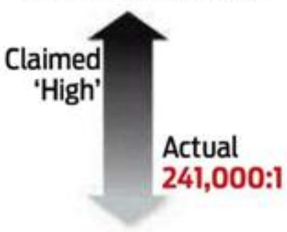


White screen: A decent figure for a 42in LED set – and the auto brightness sensor can be used to lower it



Test footage: Again, a decrease in average power consumption with movie footage

TV Contrast: ratio



Picture: An impressive figure, with a luminance of 70.4fL in Normal mode. Dynamic mode ups the contrast to over 300,000:1

Colour temp: Kelvin



Presets: No colour temp adjustments available, but the Warm preset comes close to the 6,500K ideal
Cool (normal): 10,800K
Normal (normal): 7,600K
Warm (normal): 6,600K

Panasonic has got more serious about LCD technology this year than ever before, having shifted over to edge LED lighting. But it's also introduced a couple of 42in models that have the potential to threaten its own plasma market, which also start at 42in. Can this LCD set come close to the impressive standards set by its plasma siblings?

There's nothing very original about it aesthetically, but its slender bezel and glossy finish are a step up from the brand's former affordable LCDs.

Its connections are a bit of a downer, though; it only has three HDMIs when some rivals at this price level manage four. But worse is its limited multimedia support. There's no USB port, and the provided LAN port is merely there to support a built-in Freeview HD tuner; it doesn't enable access to Panasonic's Viera Connect service or file streaming from a networked DLNA PC.

Redeeming feature

Thankfully, the L42E3B is saved from being a total multimedia [illegible]

Easy peasy: The L42E3B's remote is a no-nonsense affair



enables you to play JPEG stills, video files or MP3s.

As the most expensive TV in this roundup, the L42E3B's lack of multimedia prowess leaves us looking to its other features and picture quality to justify its relative expense. But it doesn't do anything special in either department.

The onscreen menus, while prettier than last year's vintage, offer only one notable discovery in the form of a Resolution Enhancer you can use to improve the clarity and detail of standard-definition sources.

The screen itself is a straightforward 50Hz affair, with no significant motion processing around to reduce blur and/or judder. Surprisingly, the L42E3B doesn't benefit from Panasonic's IPS Alpha panel design, with its potentially wider viewing angles, either, even though other models in the series do!

Despite its startlingly basic specification, the L42E3B is a solid performer. One thing that stands out right away is the evenness of its backlight output, which presents dark scenes with precious little evidence of the clouding effect that upsets so many edge LED TVs. Black levels are comfortably deeper than those of the LG 42LV450U.

I also appreciated the L42E3B's approach to colours; the rather warm look to tones initially looks a bit strange, but grows on you over time, until eventually it feels more natural than the harsher palettes usually offered by most sets.

The L42E3B isn't without its problems, though. For instance, while black levels look deep, they lack shadow detail. Troubling, too, is a lack of sharpness when watching HD compared with the other TVs featured here. Some of this is due to motion blur, and there's also more video noise than I would expect. The absent IPS Alpha panel means the L42E3B can't be comfortably watched from as wide an angle as many Panasonic LCD TVs too.

I can at least finish my tests on a high note – the L42E3B's audio is slightly richer and clearer than usual by edge LED TV standards. But I'm not sure that's enough to raise it above being merely average.

Precious smarty pants

Samsung replays the annual trick of ripping up the affordable TV rule book



One-touch: The Smart button is your point of entry to Samsung's Smart Hub



Samsung's entrant into this affordable TV face-off certainly hits the ground running, with an ultra-svelte, ultra-cute chassis design that makes the TV look much more expensive than it is.

Its connections wouldn't look out of place on a more expensive set either, given that they include four HDMIs, a LAN port and two USBs.

Impressively, the LAN can deliver either online connection to Samsung's latest Smart TV platform, or DLNA PC streaming, while the USBs can make the TV wi-fi-ready via an optional dongle, or play back photo, video or music files directly from USB sticks.

A Freeview HD tuner is a welcome feature, while motion handling should benefit from the inclusion of 100Hz processing, with the judicious use of the TruMotion system.

Samsung's latest Smart TV service is a substantial improvement over previous Samsung online generations. The new Smart Hub 'home screen' provides easy, clear [illegible] entity of sources, from your normal AV inputs to all the various video streaming and apps services now available through Samsung's online portal.

The key services here include the BBC iPlayer, LoveFilm, AceTrax, YouTube, Facebook and Twitter, with a supporting cast of dozens of smaller apps.

The UE40D5520 doesn't enjoy the open Web browser and Skype functions found higher up Samsung's range, but its online services still rank as excellent for such a pocket-friendly 40in TV.

Sharp shooter

The Samsung's pictures are extremely impressive. Images look supremely sharp with the clean, detail-rich *True Grit* Blu-ray, even during the film's occasional bursts of frenetic action.

The relative suppression of motion blur also helps HD seem crisp, an effect further enhanced by the screen's punchy contrast and brightness combination. This is further underpinned by the deepest black level response in this group test. There is some backlight inconsistency straight from the box, but if you tone down the backlight and brightness levels, the anomalies can be reduced to the point where they're hardly noticeable.

Crucially, the picture never loses too much shadow detail during the nighttime scenes of my *True Grit* or *Don't Look Now* Blu-rays.

Colours, meanwhile, are rich, pure and impressively believable in tone, aside from the occasional slightly dominant orange, and standard-definition images are unusually good, too.

The dynamic contrast system can cause brightness 'jumps' and fine details can shimmer a bit. The UE40D5520's audio is curious ,too, in that it actually goes quieter when it's supposed to be going loud, presumably because the speakers collapse under pressure.

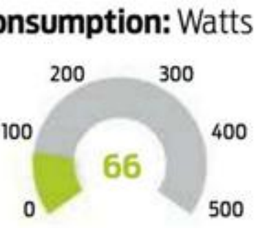
Of course, it wouldn't be realistic to expect a £600, 40in TV to be perfect. The best you can hope for at such a price is a good all-round combination. And Samsung's UE40D5520 is certainly that.

→ Tech Labs

Power consumption: Watts

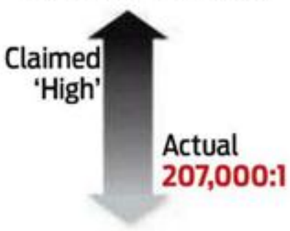


White screen: With our 100IRE full white display, power use is reasonable for a 40in TV



Test footage: There's not much of a drop in average consumption with real world footage

TV Contrast: ratio



Picture: Another set that justifies its claimed contrast ratio, with a measurement of 207,000:1 in Standard mode and a luminance of 60.5fL

Colour temp: Kelvin



Presets: From Standard picture mode the Warm 2 colour temperature preset proved the most accurate
Cool: 10,800K
Standard: 8,800K
Warm 1: 7,300K
Warm 2: 6,400K

Old-school charmer

Despite its CCFL backlighting, Sony's TV holds its own versus the LED edgers



→ Tech Labs

Power consumption: Watts



White screen: The Sony's CCFL backlight explains the somewhat high power consumption



Test footage: The increase measured here is a result of the speakers drawing power during movie viewing

TV Contrast: ratio



Picture: A good real world figure for a CCFL LCD, although the luminance of 25.5fL illustrates the difference in brightness compared to LED models

Colour temp: Kelvin



Presets: With Cinema 1 mode activated, the Warm 2 preset delivers a CT of 6,400K
Warm 2: 6,400K
Warm 1: 7,600K
Neutral: 8,600K
Cool: 10,200K

The biggest shift in the TV world this year has been towards edge LED lighting from the traditional CCFL illumination system.

Sony's 40CX523 is the only one in the group that sticks with a CCFL 'engine' in its bid to be cheap.

This immediately puts the set at a slight disadvantage aesthetically, as it's clearly broader in the butt than our other contenders. Its fascia is a bit plasticky too, though the black and grey works quite nicely.

The set's connections do compensate, though, and you'll find a quartet of HDMIs as well as a surprising amount of multimedia support in the form of two USBs, a LAN port, and optional wi-fi via a USB dongle.

The USB ports can play back most of the usual video, photo and music file suspects, while the LAN port permits both streaming from a DLNA PC and access to Sony's Bravia Internet Video (BIV) system. The LAN also accompanies a built-in Freeview HD tuner.

The BIV service hasn't perhaps [illegible] TV

systems of some rival platforms, but that doesn't stop it from being the best online service currently available on a TV. I like it because, aside from its unhelpful Web browser, it focuses so strongly on providing on-demand video streams.

LoveFilm, Sony's Qriocity film service, BBC iPlayer, a Sky News headline video feed, the Demand 5 catch-up service, the World of Sony classic TV show archive, YouTube, and many more besides provide hours of often very watchable material. It's far more in tune with what I want from a TV than any number of silly apps telling me how to tie a tie or play music with wine glasses.

CCFL star

Of course, no amount of video streaming options would matter if the experience of watching video on the 40CX523 wasn't an enjoyable watch. Good news then, that the Sony is a strong performer.

Particularly striking, given its CCFL lighting, is how deep its black colours manage to look. The nighttime shoot-out outside an isolated cabin in *True Grit* looks natural, with less of the telltale CCFL 'greyness' than I had come to expect.

Handsome: For an affordable set, the Sony's remote looks classy



Colours are punchy, rich and mostly natural, too, and pictures are quite bright considering they're not being driven by an LED system.

Images are free of noise despite being very detailed and usually crisp, and overall there's just a great sense of direct connection with what you're watching. The generally likable pictures are also supported by unusually open and engaging audio.

Inevitably, the 40CX523's pictures aren't wholly immune to either their CCFL lighting or the set's focus on affordability. For instance, the lack of any 100Hz processing means motion can look slightly blurry on occasion. Also, CCFL's need to suppress brightness uniformly across the whole screen to hit a good black level means that some very dark scenes can lack shadow detail.

Finally, there's a little backlight inconsistency in the corners of the screen, but this can be minimised via the contrast and brightness settings. >

Trouble on the edge

This £500 42in TV proves edge LED lighting isn't a guarantee of quality



→ Tech Labs

Power consumption: Watts



White screen: The Toshiba is one of the more efficient performers in our grouptest



Test footage: A respectable average figure with movie footage

TV Contrast: ratio



Picture: Not as high a figure as you might expect given the manufacturer's claim. Luminance measured at 74.0fL The Dynamic mode nudges contrast up to 4,200:1

Colour temp: Kelvin



Presets: Out of the box the 'warm' mode was the most accurate measuring 6,700K
Cool: 11,600K
Medium: 8,600K
Warm: 6,700K

Toshiba's budget contender has a chunkier chassis than I'd expect to see on 40-42in TVs these days. But it still delivers its pictures via an edge LED lighting system, so at £500, it could end up being one of the season's biggest bargains.

I said 'could'. Right away, some hefty compromises loom large. The 42HL833 doesn't have a Freeview HD tuner, and it also lacks any online Smart TV functions, or any DLNA PC streaming. And it's only got two HDMIs when some rivals have four. You do at least get a passable amount of file playback flexibility via a USB port, though.

The set's limitations continue with a screen specification that only allows 50Hz scanning.

Onscreen menus put more flexibility at your disposal than I'd expected to find, including gamma adjustment, and a colour management system that lets you adjust the hue, saturation and brightness of the red, green, blue, yellow, cyan and magenta colour

that you don't have to be rich to want to tinker with your colour settings, but, as with the LG set, I wonder if these features will get used.

After spending a little time in the easy-to-follow menus, the 42HL833's picture quality starts well. Brightness levels, in particular, are far better than the equivalent models in Toshiba's 2010 LCD range, thanks, no doubt, to the move to edge LED lighting from CCFL last year.

This extra brightness also makes colours potent, pure, and natural, and there's a decent level of subtlety to the presentation of colour blends and tonal shifts, even in dark scenes.

A way with HD

The 42HL833 also surprises with HD pictures that are crisp and full of decent detailing. What's more, this clarity doesn't reduce particularly when the set is asked to handle lots of motion, despite the screen only being 50Hz.

Thanks to these strengths, pictures are up there with the best in this group test when showing bright, colourful HD content.

Nondescript: The simple remote won't win any style awards



However, dark scenes are less satisfying, as black levels don't go very deep, leaving them looking a little bit grey. Also, as commonly happens with edge LED sets, there are patches of backlight inconsistency at the screen's edges, especially if you don't knock back the set's contrast and brightness/backlight settings.

The 42HL833's standard-def upscaling is average too, lacking the crispness that is enjoyed from higher-specced Toshiba TVs equipped with the brand's nifty Resolution+ processing.

Sound-wise, the 42HL833 can go quite loud, although the quality of the soundstage reduces markedly during dense action sequences, with harsh trebles and a narrow, overcrowded mid range that doesn't leave much room for bass.

Overall, the 42HL833 really isn't a bad 'minimal frills' effort for a 42in TV routinely available for less than £500. But it is also impossible to ignore rivals in this group test, which offer a step up in quality and features, for only £50-£100 more. >

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P

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Final standings



While auditioning this quintet of TVs, I was disappointed by the continuing problems edge LED lighting has in delivering a consistent backlight level. This is something the tech really could do with sorting out going forward – although I suspect that to do so is rather difficult.

Getting into specifics and some attempt at a final 'league table', my fifth placed TV today is LG's 42LV450U. It lacks the sort of contrast likely to satisfy a *Home Cinema Choice* reader, doesn't have a Freeview HD tuner, and finally, just doesn't seem to make much sense in the context of LG's range as a whole.

Fourth place goes to Panasonic's L42E3B. This set's basic picture quality isn't bad, with noticeably more contrast than the LG model. But pictures lack a little sharpness, even with HD, and the TV just doesn't have enough features to justify being at the upper end of the group test's price range.

Third spot is bagged by the Toshiba 42HL833. This set, too, is distinctly lacking in features and has a few contrast issues at times. But it's comfortably the most affordable TV included, and with that in mind its AV quality is respectable enough to satisfy punters who can't stretch further than £500.

My silver medallist is the Sony 40CX523. This set makes a potent argument for CCFL lighting as a highly viable option at the lower reaches of the TV market, and combines its likable pictures with some truly excellent multimedia and online features.

Top dog today, though, is Samsung's UE40D5520. This sleekly-designed 40incher inevitably has a few irritations, most notably traces of backlight consistency caused by the edge LED lighting engine. But, overall, the UE40D5520's combination of AV quality and features makes it almost stupidly good value

Mount up...

Take your new flatscreen TV to the wall with a mounting kit



Giving your new 40 or 42in TV its own dedicated wall space is a great way to add some geek chic to your living room, and you may be surprised how affordable they can be – fixed mounts, which simply lock your flatscreen to your wall and nothing else, can be available for as little as £25.

Of course, you might want the option of tilting or swivelling the TV to ensure you're viewing it straight on. If so, you'll need to spend extra. Dedicated brands such as Omnimount, Vogels and Peerless make a wide variety of adjustable mounts for all sizes and weights, with prices ranging from around £60 to over £250. Some can even be remote-controlled.

1ST



HCC VERDICT

Samsung UE40D5520
£600 Approx

Highs: Beautifully designed; impressive all-round picture quality, excellent Smart TV features
Lows: Minor, avoidable backlight inconsistency; sonics struggle

Performance: 1 2 3 **4** 5
Design: 1 2 3 4 **5**
Features: 1 2 3 4 **5**
Overall: 1 2 3 4 **5**

→ Specifications

3D: *NO*
HD Ready: *YES* full HD, 1080p/24
Tuner: *YES* Freeview HD with CI slot
Component video: *YES* one
HDMI: *YES* four v1.3
PC In put: *YES* one D-Sub
Resolution: 1,920 x 1,080
Sound: 2 x 10W
Brightness (claimed): N/A
Contrast ratio (claimed): 'High'
Dimensions (screen): 955.5(w) x 574(h) x 29.9(d)mm
Weight: 11.5kg
Features: 100Hz; edge LED lighting; JPEG, MP3 and video playback from USB drives; optional wi-fi via dongle; Smart TV online functionality including apps and various video streaming services

2ND



HCC VERDICT

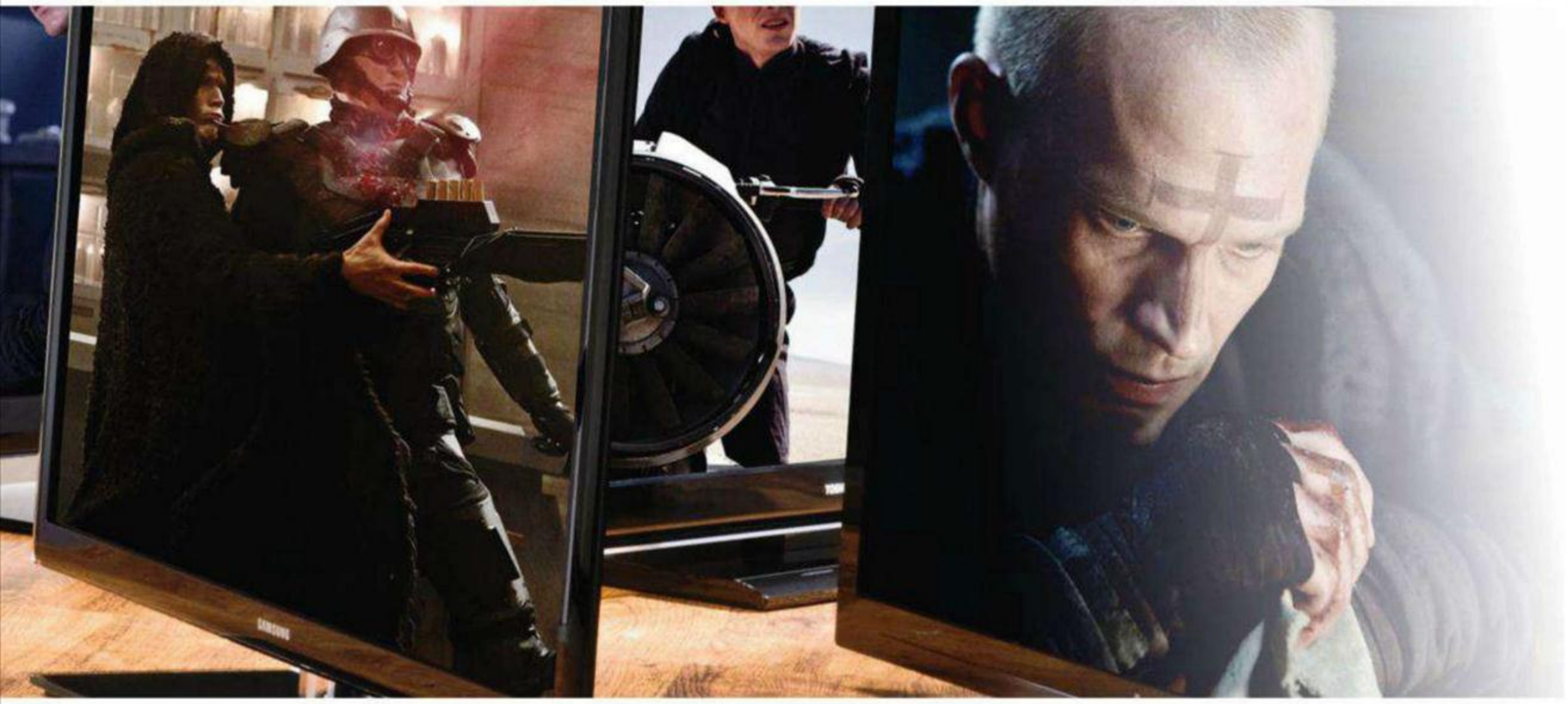
Sony KDL-40CX523
£550 Approx

Highs: Very affordable; outstanding online functionality; good all-round AV performance
Lows: Slight lack of shadow detail; minor motion blur

Performance: 1 2 3 **4** 5
Design: 1 2 **3** 4 5
Features: 1 2 3 **4** 5
Overall: 1 2 3 **4** 5

→ Specifications

3D: *NO*
HD Ready: *YES* full HD, 1080p/24
Tuner: *YES* Freeview HD with CI slot
Component video: *YES* one
HDMI: *YES* four v1.3
PC Input: *YES* one D-Sub
Resolution: 1,920 x 1,080
Sound: 2 x 10W
Brightness (claimed): N/A
Contrast ratio (claimed): 'High'
Dimensions (screen): 991(w) x 606(h) x 71(d)mm
Weight: 12.9kg
Features: 50Hz; CCFL lighting; JPEG, MP3 and video playback from USB drives; optional wi-fi via dongle, Bravia Internet Video online functionality; web browser; USB HDD recording; X-Reality processing for improving the look of streamed content



3RD



HCC VERDICT

Toshiba 42HL833
£500 Approx

Highs: Great price; good colour and sharpness response; easy to use
Lows: Black level response not the best; backlight inconsistency; muddy sound

Performance: 1 2 3 4 5
Design: 1 2 3 4 5
Features: 1 2 3 4 5

Overall: 1 2 3 4 5

→ Specifications

3D: *NO*
HD Ready: *YES* full HD, 1080p/24
Tuner: *YES* Freeview with CI slot
Component video: *YES* one
HDMI: *YES* two v1.3
PC Input: *YES* one D-Sub
Resolution: 1,920 x 1,080
Sound: 2 x 7W
Brightness (claimed): 360cd/m2
Contrast ratio (claimed): 3,000,000:1 dynamic
Dimensions (screen): 1007(w) x 630(h) x 45(d)mm
Weight: 13.6kg
Features: 50Hz; edge LED lighting; JPEG, MP3 and video playback from USB drives; colour management system

4TH



HCC VERDICT

Panasonic TX-L42E3B
£600 Approx

Highs: Easy on the eye; delivers video-friendly colour balance straight out of the box
Lows: HD images look soft; pricey considering lack of features

Performance: 1 2 3 4 5
Design: 1 2 3 4 5
Features: 1 2 3 4 5

Overall: 1 2 3 4 5

→ Specifications

3D: *NO*
HD Ready: *YES* full HD, 1080p/24
Tuner: *YES* Freeview HD with CI slot
Component video: *YES* one
HDMI: *YES* three v1.3
PC Input: *YES* one D-Sub
Resolution: 1,920 x 1,080
Sound: 2 x 10W
Brightness (claimed): N/A
Contrast ratio (claimed): 'High'
Dimensions (screen): 1002(w) x 611(h) x 75(d)mm
Weight: 14kg
Features: 50Hz; edge LED lighting; Resolution detail enhancer; JPEG, MP3 and video playback from SD card

5TH



HCC VERDICT

LG 42LV450U
£530 Approx

Highs: Cheap; attractive; produces very good, if over bright, HD pictures
Lows: No Freeview HD tuner or Smart TV; black level response is not possible to balance

Performance: 1 2 3 4 5
Design: 1 2 3 4 5
Features: 1 2 3 4 5

Overall: 1 2 3 4 5

→ Specifications

3D: *NO*
HD Ready: *YES* full HD, 1080p/24
Tuner: *YES* Freeview with CI slot
Component video: *YES* one
HDMI: *YES* three v1.3
PC Input: *YES* one D-Sub
Resolution: 1,920 x 1,080
Sound: 2 x 10W
Brightness (claimed): 400cd/m²
Contrast ratio (claimed): 4,000,000:1
Dimensions (screen): 1005(w) x 621(h) x 29.9(d)mm
Weight: 13kg
Features: 400Hz MCI (LG's Motion Clarity Index); edge LED lighting; ISF certification with colour and gamma management; JPEG, MP3 and video playback from USB; Picture Wizard set up aid

Finishing touches

Adrian Justins trawls the shelves for those must-have home cinema extras



I-DECK 100 & 200

Approx £300/£400

Monitor Audio has unleashed its latest pod berths, the £300 i-deck 100 and £400 i-deck 200. Both models incorporate specialised high-speed 28/56bit dual precision DACs, and each i-deck has four individually powered C-CAM alloy drivers. The i-deck 100 has a total 90W of amplification, whilst the i-deck 200 musters 150W in total. Automatic Position Correction (APC) uses an internal microphone to sample and correct for the room response in any location each time the i-deck is powered up. A flexible dock connector fits most iPods and iPhones.

www.monitoraudio.co.uk

HCC VERDICT

A marriage of elegant looks and



APPLE MAC MINI

Approx £530

Measuring less than 20cm in any direction, the latest Mac Mini's minimalist size and looks reveal little of the technological development that's taken place under the hood. Running on Apple's contemporary OS X Lion operating system, this [illegible]B compact computer is [illegible]ble with upgrade options including a 750GB 7,200RPM hard drive, plus a 256GB solid state drive.

The Mac Mini eschews an optical disc drive, but lets you 'borrow' a nearby computer's disc drive using wi-fi. You can also stream using Bluetooth or by a cabled connection to an external drive or computer, including those with the new Thunderbolt I/O technology which allows 10Gbps of throughput in both directions. HDMI is provided for viewing full HD entertainment on a big screen, whilst Ethernet takes care of no-nonsense networking. Other connections include an SDXC card slot and four USB ports.

www.apple.com

HCC VERDICT

Good potential as a home cinema PC



LIBRATONE LIVE

Approx £600

Everybody's going wire-free these days, including Danish speaker specialist Libratone, whose latest Full Room speakers support Apple's AirPlay wireless audio streaming standard. AirPlay transmits sounds from the iPhone, iPad, iPod and iTunes family of audio devices to compatible kit.

Libratone's speakers have a 150W output and use five dedicated amplifiers and advanced digital signal processing. The company's patented FullRoom technology hopes to provide a room-filling soundscape with the tweeters and midrange drivers dispersing 360º sound, with Libratone claiming that Live plays like an acoustic instrument. Each speaker features a satin chrome handle, is finished in luxury cashmere wool, and is available in several colours, including slate grey (standard), blood orange, vanilla beige, blueberry black and lime green.

www.libratone.com

HCC VERDICT

Don't forget your AirPlay app for remotely controlling iTunes



SONY NWZ-A865 WALKMAN

Approx £150

The latest incarnation of the Walkman brand takes portable premium sound to new heights as the 16GB NWZ-A865 is bestowed with a new-generation S-Master MX digital amplifier technology that reduces noise levels and distortion. Video clarity also gets top priority with a 2.8in touch-screen LCD and intuitive new user interface that makes fingertip-browsing a doddle. File transfer is drag-and-drop even from iTunes and you can stream wirelessly over Bluetooth. Video file compatibility includes MPEG-4, AVC (H.264/AVC) and WMV9, whilst audio comprises MP3, WMA (Non-DRM/DRM), AAC-LC (Non-DRM) and Linear PCM.

www.sony.com

HCC VERDICT

[illegible]less nights

MONSTER MILES DAVIS TRUMPET EARPHONES

Approx £300

Precision-tuned to reproduce the subtle nuances and unique acoustic tones of jazz, these in-ear 'phones allow the earpiece to rest comfortably and deep within the wearer's ear canal, so that music can be heard with clarity and presence. Smartphone (including iPhone) users can also benefit from using a ControlTalk headphone cable that also allows hands-free phone calling and full transport control of music.

www.monstercable.com

HCC VERDICT

Makes music sound miles better (ha!)



Clips...

Small items that will make a big difference to your system

WireWorld Chroma HDMI cable



£42 approx
Some HDMI cables suffer from poor grip and can work themselves loose. With thicker silver cladding on its contact pins to give improved conductivity and better mechanical grip, this upgraded connector also features asymmetric locking wedges for more hold than a Harmony Hairspray factory.
www.wireworldcable.co.uk

Buffalo MiniStation Plus



£50 Approx
Available in 500GB and 1TB capacities, this portable drive with USB 3.0 connectivity comes from the school of hard knocks and, like Iron Man, combines robustness with fine looks. Choose from piano-black, silver or red.
www.buffalo-technology.com

Nokia BH-11P



Approx £35
Running on A2DP Bluetooth wireless technology, these colourful headphones have a clip that weighs a mere 15.5g and can stream music continuously for around six hours from a Bluetooth-equipped music player.
www.nokia.com

Tangent PearlBox



Approx £120
Clearly aimed at those who like gadgets but don't want their house to look too geeky, Tangent's new iPod dock resembles a jewellery box, and has no buttons at all – control is done via remote or your MP3 player's own interface. Audio is delivered from a pair of hidden tweeters and a base-mounted subwoofer. White and black finishes are available.
www.tangent-audio.com

AVaficionado

For those in the know...

High definition universal Blu-ray Disc™ players offering pristine quality video and audio for home entertainment

Modified Oppo BDP-93EU and BDP-95EU units are available from AV Aficionado in multi-region (DVD) and multi-zone/multi-region (Blu-ray/DVD) options. All products are supplied with a two-year warranty.

Features include:
- Blu-ray 3D
- SACD and DVD-Audio
- Dual HDMI outputs
- eSATA and dual USB 2.0 ports with NTFS support
- Network streaming and Wireless-N

Designed for the Audiophile, the Oppo BDP-95EU also features:
- Dual ES9018 SABRE 32-bt reference DAC (7.1 and dedicated stereo)
- Balanced stereo XLR
- Toroidal transformer





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PLAYBACK

→Software highlights **HANNA** Girl assassin on the loose **SCARFACE** Pacino's psychotic gangster is a killer Blu-ray **MILLER'S CROSSING** Coen Bros' drama gets a timely HD transfer

→Opinion **FILM FANATIC** The Beek looks at the effects of the riots on film distribution

DOWNLOAD CENTRAL Apps are hot and so is 3D on-demand **AND MUCH MORE!**

Mad about the girls

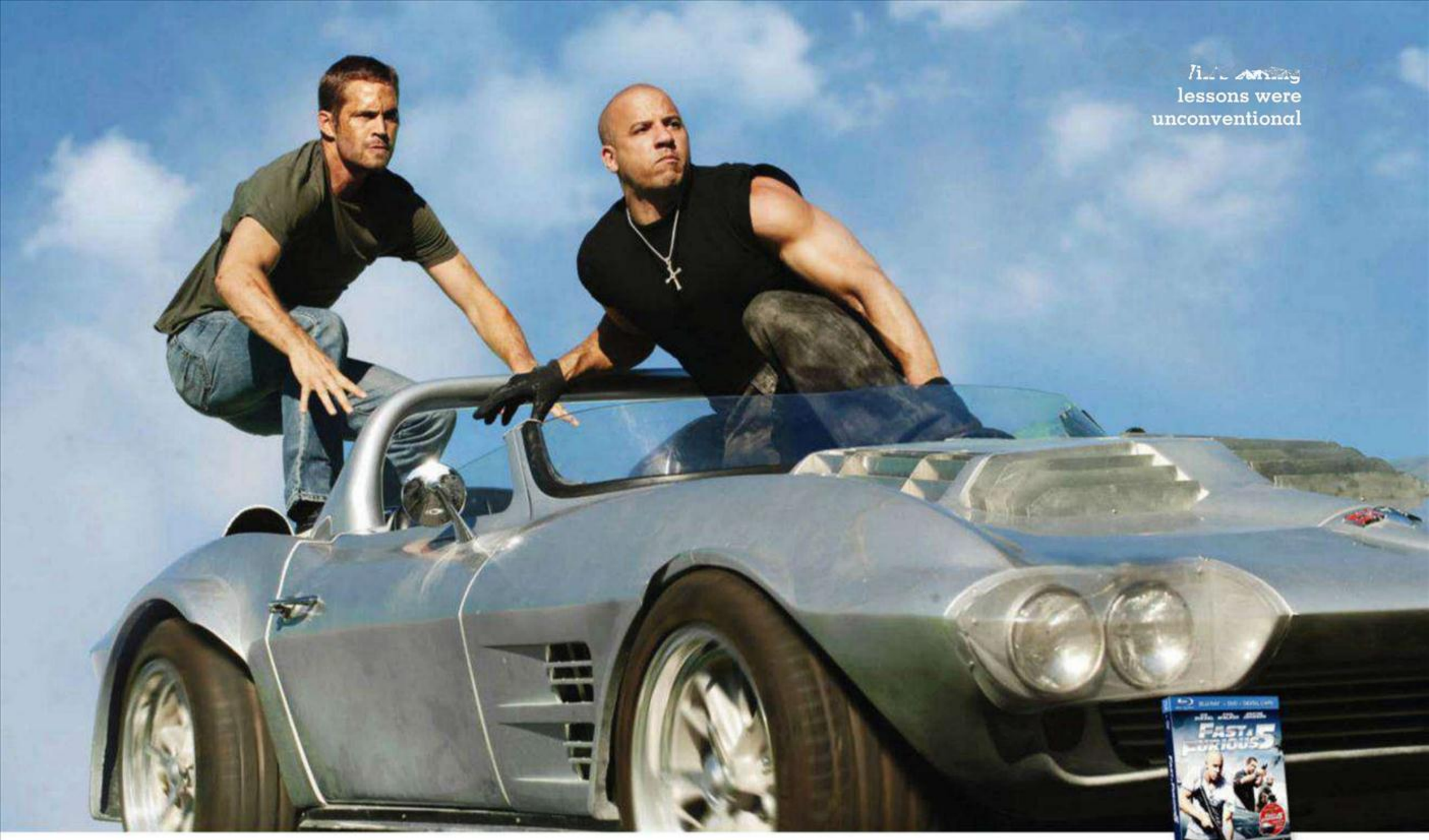
Sucker Punch: Extended Cut – Triple Play → Double Play → Warner Home Video → All-region BD/R2 DVD

Bedlam ensues in the mind of a disturbed young woman who lets her imagination run wild. *HCC* joins in the fun on page 89



HCC Ratings key

Sucker Punch	1 2 3 4 **5**
Punch Drunk Love	1 2 3 **4** 5
Rum Punch	1 2 **3** 4 5
Punch and Judy	1 **2** 3 4 5
Judy Finnigan	**1** 2 3 4 5



Macho machines marathon

The hyperbolic action from the fifth film in the Fast & Furious franchise won't let fans down





HCC VERDICT

Fast & Furious 5: Triple Play → Universal Pictures → All-region BD/R2 DVD → £25 Approx

We say: Entertaining blockbuster nabs pole position on Blu-ray

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

→ Fast & Furious 5

It's 10 years since Rob Cohen's street racing flick turned Vin Diesel into an action star and kick-started a new franchise for petrolheads. Since then, director Justin Lin has transformed it so much that this latest rivals the year's best action blockbusters – though street racing barely gets a look in. Instead, cast members from across the franchise come together in a kind of automotive *Ocean's 11* that pits Dominic (Diesel) and his crew of lovable rogues against a vicious drug lord. They also have the unwanted attention of a federal agent played by Dwayne 'The Rock' Johnson – who ups the testosterone and action quotient further. It may not heed the laws of physics, but it's still breath-taking action cinema.

Chris Jenkins: This riotous action flick screeches on to Blu-ray with a stunning AVC 2.40:1 1080p. Lin told us last issue that he re-times the colours for Blu-ray, and this has paid off with the rich palette and sun-drenched locations. Crushed blacks give it a high-contrast look full of shadows, which heightens the sense of heat and results in a more textured aesthetic. The detailing is excellent, and there's an inherent grain structure throughout.

Mark Craven: This franchise has been thrilling home cinema hedz with eardrum-bashing sonics for ages, and this DTS-HD MA 5.1 mix is surely the best yet. While its bass-heavy music and subtle atmospherics bring Rio's *favelas* to life, it's the action beats that grab you. Whether it's the sharply rendered and well-placed gunfire during the rooftop chase (Chapter 5), or the surround sound action during the heist (C16/17), you're in for a real treat.

Anton van Beek: Universal's disc offers both the 131-minute Theatrical Cut and an Extended Cut which is actually only 84 seconds longer. Also on offer are a couple of U-Control features for the shorter cut – a PiP behind-the-scenes mode and a Scene Explorer that offers a multi-angle deconstruction of the train heist. These U-Control features can also run on a laptop or iPad using a downloadable Second Screen app. Two deleted scenes and 10 behind-the-scenes featurettes make up the rest of the extras, with a DVD and Digital Copy.



Priest

Sony Pictures → All-region BD
£25 Approx



Legion director, Scott Charles Stewart, is still pushing religion-themed thrillers, with a steampunk, sci-fi western that re-stages the plot of *The Searchers*. With CGI vampires instead of 'injuns' and Paul Bettany's kung-fu priest replacing John Wayne's racist cowboy, it is as bad as it sounds. Still, some will be won over by the Blu-ray's stunningly detailed AVC 2.40:1 1080p imagery and bombastic DTS-HD MA 5.1 audio. Extras include picture-in-picture behind-the-scenes video, a commentary, seven deleted scenes and two featurettes. ***AvB***

1 2 3 4 5

Arthur: Triple Play

Warner Home Video → All-region BD/ R2 DVD → £25 Approx



With its over reliance on schmaltz, 'kooky' performances and limp gags, this remake is more like an average Adam Sandler vehicle than the original 1981 Dudley Moore classic of the same name. And, while Russell Brand undoubtedly looked like a good choice for the childlike lead, he lacks the charisma needed to let viewers see beyond the character's many flaws. The Blu-ray disc itself scores well technically, thanks to vibrant AVC 1.78:1 1080p visuals and crisp DTS-HD MA 5.1 sonics. But a few alternate scenes and a DVD and Digital Copy are among miserly extras. ***AvB***

1 2 3 4 5

Red Riding Hood: Alternate Cut – Triple Play

Warner Home Video → All-region BD/ R2 DVD → £25 Approx



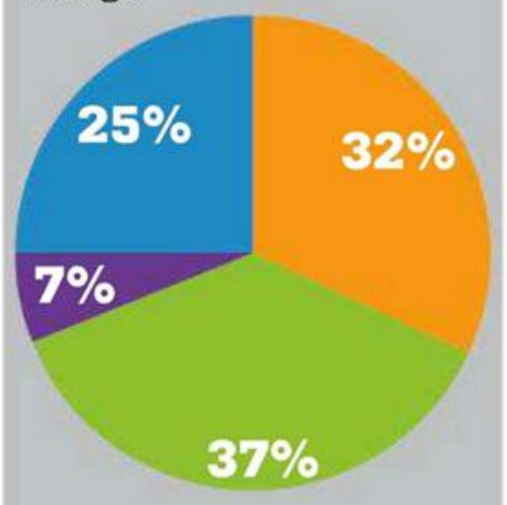
Recasting Charles Perrault's fairy tale as a werewolf story is hardly original, but even so, there's no excuse for the lack of fresh or even interesting ideas here. Instead of the psychological insight of Neil Jordan's sublime *The Company of Wolves*, this flick aims for the *Twilight* crowd with its young cast and unconvincing love triangle. The Blu-ray includes two cuts of the film – both of which look and sound great in HD – plus a PiP commentary and a surprisingly sizeable collection of short featurettes. ***AvB***

1 2 3 4 5

We asked you...

Which of these superhero flicks are you most excited about seeing on Blu-ray?

- Thor
- X-Men: First Class
- Green Lantern
- Captain America: The First Avenger



Results of poll from www.homecinemachoice.com

Sweet 16 and never been killed

Girl assassin gets chased across Europe in a Blu-ray that looks and sounds good



→ Hanna

Marketed as a straightforward action-thriller, Hanna is anything, but your typical Hollywood flick. The storyline about a sixteen-year-old girl (Saoirse Ronan) who, having spent her life being trained to survive and kill, goes on the run from a vindictive CIA chief (Cate Blanchett), sounds like standard blockbuster material. But director Joe Wright (*Pride & Prejudice*, *Atonement*) takes it in a completely unexpected direction. He uses it as the springboard for a modern fairytale that seems as much in debt to the grotesquery of David Lynch or The Brothers Grimm as it does to the traditions and conventions of the action genre it continually toys with. It's the kind of brave, inventive filmmaking that is sure to divide audiences right down the middle.

Chris Jenkins: Why is it that Universal struggles to get the best out of its catalogue releases on Blu-ray, yet always manages to blow us away with its newest movies? This high-def outing for *Hanna* is a real stunner, presenting viewers with an exceptionally cinematic AVC 2.40:1 1080p image full of sumptuous colours, well-resolved textures and fine grain. The film's varying visual style means that the imagery isn't always razor sharp (Wright clearly enjoys playing with lighting and focus), but at its best – for example, Hanna's appearance out from a hole in the Moroccan desert in Chapter 6 – the encode is satisfyingly rich, crisp and detailed.

Mark Craven: *Hanna*'s soundscape is every bit as varied as its locations and aesthetics, and this [illegible] does a good job of recreating this in a home cinema environment. Directionality is controlled and utterly convincing, LFE is deep and powerful, dialogue is warm and natural, while the score by The Chemical Brothers will just knock your socks off with its acidic keyboards and thundering drumbeats. Terrific.



Possibly not the best choice for a slow dance at the village disco

Anton van Beek: This platter goes back to basics with a fairly traditional, but still interesting, selection of bonus features. Wright provides an excellent solo commentary for a film, even though he admits it sometimes moves a little too fast even for him to make every point he wants to. There's also a trio of deleted scenes, an alternate ending, five production featurettes, a promo video, D-Box Motion Code for those with hi-tech sofas, My Scenes and a BD-Live link.

The set also includes a DVD and Digital Copy of the film.



HCC VERDICT

Hanna: Triple Play
Universal Pictures → All-region BD/R2 DVD → £25 Approx

We say: The film will split opinion, but its superb AV quality won't

Picture: 1 2 3 4 5
Sound: 1 2 3 4 5
Extras: 1 2 3 4 5
Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

Film Fanatic...

This month's column is a tale of two halves – both of which have cast a dark shadow across the UK home entertainment industry



As if rampant piracy hadn't done enough to damage the UK's independent film distributors, August's riots left several of these smaller companies with severe problems.

A fire started at the Sony DADC warehouse and replication centre in Enfield destroyed DVD and Blu-ray stock for various small UK film distributors. Arrow Films, Metrodome, Kaleidoscope, Third Window, Revolver, Network, Terracotta, Artificial Eye, BFI, Eureka, Dogwoof Films and Peccadillo Pictures all lost most, if not all, of their existing stock in the blaze. Replication costs, and problems finding replication sites – most are working on Christmas blockbusters for the major Hollywood studios – mean **distributors now face an uncertain future – not knowing how long existing stock will last, or if they can replace it.**

Thankfully, many have embraced legal download channels such as iTunes and Mubi, and have titles available digitally. Head to these legitimate services, rather than file-sharing sites, and you can help keep some of these smaller distributors afloat.



A friend remembered

I'd like to pay tribute to Richard Larcombe, MD of film and home entertainment PR specialist, The Associates, who recently died. Under his guidance The Associates never lost track of its independent status and remains staffed by people with a genuine passion for film – making it a true breath of fresh air in the industry.

I first met Richard more than a decade ago, when he was doing PR for BMG's UK DVD release of *Escape from New York* and *Evil Dead 2*. In the years that followed and the many conversations and post-screening pints we shared, I began to count Richard as a genuine friend.

He was one of the smartest, wittiest and most honest people I've ever had the privilege to know – which only made his recent, unexpected, death all the more painful and shocking. The industry is a poorer place without him, [illegible] life is so rich for having [illegible]im as a friend ●

Nikita: The Complete First Season

Warner Home Video → All-region BD → £25 Approx



This second TV spin-off from Luc Besson's 1990 thriller was one of last year's most eye-catching new US shows, thanks to its leading lady and some interesting new wrinkles added to a familiar concept. Warner's four-disc set impresses from the get-go with its high-gloss AVC 1.78:1 1080p imagery and high-impact DTS-HD MA 5.1 audio. Rounding out the package are deleted scenes, two episode commentaries, an interactive database, a pari of in-depth behind-the-scenes featurettes and four character profiles. Well worth hunting down. ***AvB***

1 2 3 **4** 5

Entourage: The Complete Seventh Season

HBO Video → All-region BD → £30 Approx



The big problem with this batch of 10 episodes is the decision to sideline E (always the main audience identification character) in favour of Vince as he spirals out of control, which would be okay except that he's always been the least interesting character, and nothing he does here changes that. At least it stills looks great, thanks to the colourful AVC 1.78:1 1080p encodes, and the DTS-HD MA 5.1 audio sounds equally strong. Extras are limited to episode recaps and previews, a trio of episode commentaries, an EPK featurette and an interview with Sasha Grey. ***AvB***

1 2 **3** 4 5

Chuck: The Complete Fourth Season

Warner Home Video → Region2 DVD → £35 Approx

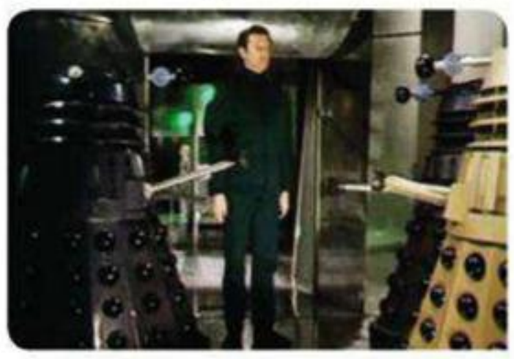


The action-comedy spy series is back with another 24 episodes, this time focusing on PC-nerd turned secret agent Chuck's search for his missing mother. Arguably, it's one of the show's strongest seasons to date, mixing plenty of big laughs with accomplished action scenes and genuinely effective drama. Unfortunately, it still tends to look hit-and-miss on DVD, with the anamorphic 1.78:1 image veering between sharp and noisy in the same scene. Extras are paltry, although the *Halo*-themed, five-part Jeff and Lester bonus story is good for a few giggles. ***AvB***

1 2 **3** 4 5

Doctor Who: Day of the Daleks – SE

2entertain → Region 2 DVD → £20 Approx



This paradox-powered outing for John Pertwee shows that Stephen Moffat-style 'timey-wimey' twists aren't unique to the revamped version of *Dr Who*. This wonderful two-disc set includes both the original broadcast version of the story, plus a 'Special Edition' that seamlessly mixes in new footage, CG effects and corrects a few goofs (including the Dalek voices). Both versions boast the usual impeccable picture and audio restoration, and the bonus features (including docs, a commentary and archival TV clips) are as plentiful and satisfying as ever. ***AvB***

1 2 3 **4** 5



Horrors of war: Tin helmets wrought havoc on the troops' hair extensions

Bring on the Britneys

School girls are doing it for themselves in this tween-agers' overactive fantasy world



→ Sucker Punch

Having found success directing a horror remake (*Dawn of the Dead*), a couple of high-profile comic book adaptations (*300* and *Watchmen*) and a CG cartoon based on a popular kids book (*Legend of the Guardians*), Zack Snyder has finally let his own imagination have free reign on the big screen and the results are... rather confusing.

If you believe Snyder, this big-budget flop about a young woman in a mental institution escaping into a series of fantasy worlds is all about female empowerment. Except that the entire movie looks like a 15-year-old boy's fever dream, being based around the concept of young ladies in tight-fitting leather and skimpy schoolgirl outfits wielding massive guns. However, while undoubtedly flawed, there are a few interesting themes at work, and the action scenes are some of the most spectacular you'll see all year.



Chris Jenkins: As per the director's earlier hit *300*, *Sucker Punch* doesn't opt for a natural look. Every shot has been post-processed to the nth degree, sometimes resulting in a slight drop in detail levels as it pumps up the black levels and saturates and goes heavy on rusty [illegible] ws. It may not be everybody's cup of tea, but it's exactly how the film was designed to look. And the clarity of the visuals, combined with the technical proficiency of the two AVC 2.40:1 1080p encodes (there's an Extended Cut, too) makes this a flawless experience.

Mark Craven: Whichever version of the film you watch, the DTS-HD MA 5.1 audio will knock your socks off. Matching the superb quality of the images, it's is a ferocious tour-de-force of immaculately placed surround effects, devastating bass, pin-perfect dialogue reproduction and astonishing musical tonality. Every scene offers acoustic thrills and, while it's the action set-pieces that wow, even the slowest moments bristle with wonderful atmospheric touches. Demo-worthy stuff.

Anton van Beek: This three-disc Triple Play release initially appears to offer more film presentations than bonus features. The Blu-ray discs are dedicated to the two different cuts, while the DVD houses both a regular standard-def version of the movie and a Digital Copy (both the shorter cut) for you to watch on the go.

While the lack of commentaries and featurettes is odd, a few minutes with the Extended Cut disc's Maximum Movie Mode shows why they weren't needed. Hosted by Snyder, it's one of the best I've seen and delivers an incisive and comprehensive look at all areas of production. Extras on the Theatrical Cut BD are four short motion comics and a soundtrack featurette. >



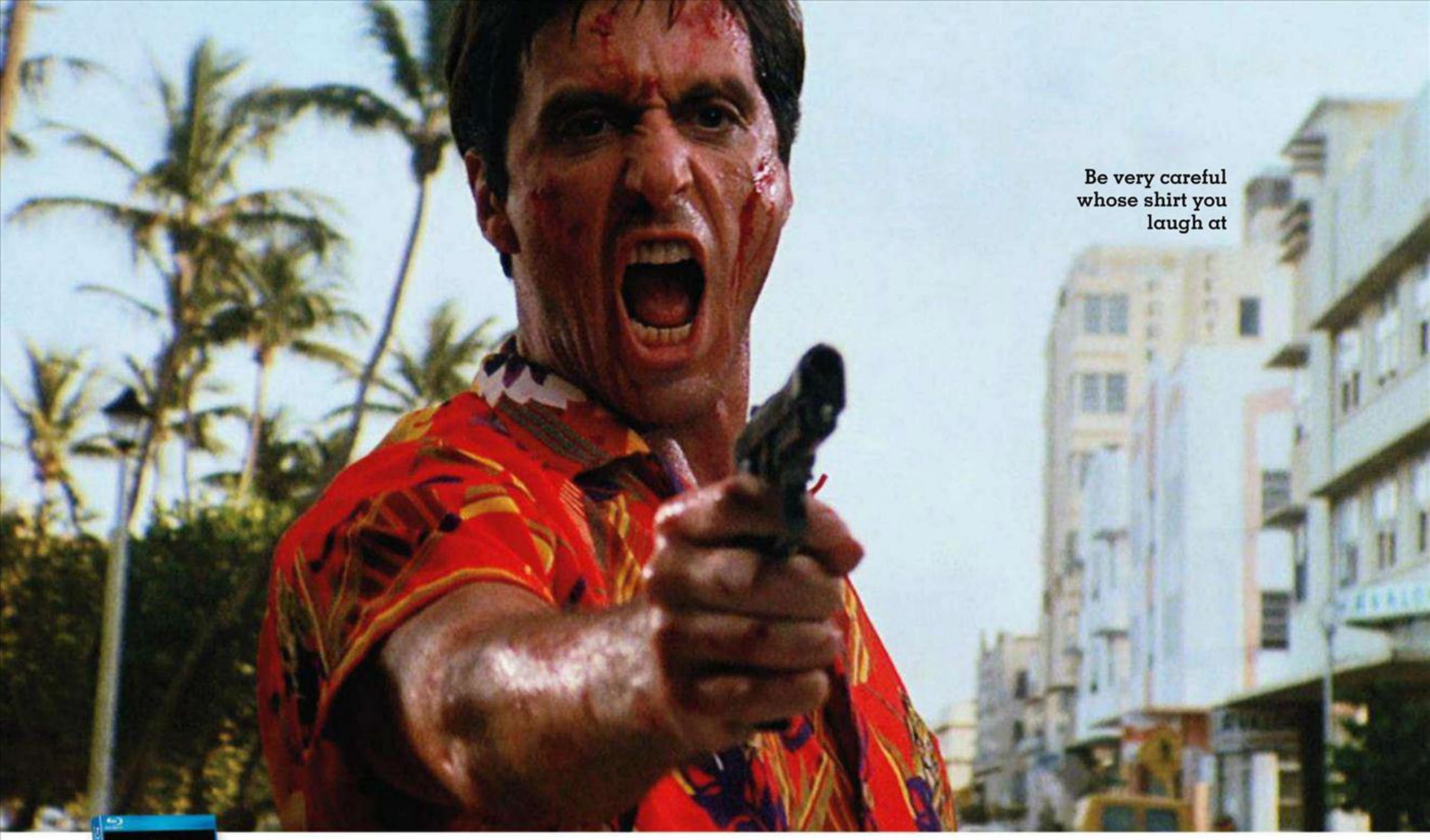


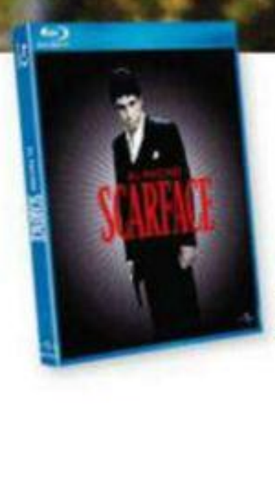
HCC VERDICT

Sucker Punch: Extended Cut – Triple Play → Warner Home Video → All-region BD/R2 DVD → £25 Approx

We say: You might hate the movie, but the AV quality rocks

Picture: 1 2 3 4 **5**
Sound: 1 2 3 4 **5**
Extras: 1 2 **3** 4 5
Movie: 1 2 **3** 4 5
Overall: 1 2 **3** 4 5





Keep talkin', baby...

Pacino's tooled-up, coke-headed gangster of the 1980s hits Blu-ray





HCC VERDICT

Scarface → Universal Pictures → All-region BD → £25 Approx

We say: A strong, but not perfect, Blu-ray outing for De Palma's '80s gangster classic

Picture: 1 2 3 4 5
Sound: 1 2 3 4 5
Extras: 1 2 3 4 5
Movie: 1 2 3 4 5
Overall: 1 2 3 4 5

→ Scarface

If the 1980s were truly the decade of excess, then no film better encapsulates that than *Scarface*. With a script by Oliver Stone, direction by Brian De Palma and a barnstorming central performance by Al Pacino, this loose remake of Howard Hawks' acclaimed 1930s mobster film is anything but subtle, as it plays out the almost Shakespearean tragedy of Tony Montana, a small-time hood from Cuba arriving in Florida with dreams of making it big, only to end up self-destructing under the weight of his ego, a mountain of cocaine and some rather odd feelings for his sister. Great stuff.

Chris Jenkins: This Blu-ray edition of *Scarface* is an improvement on past DVD incarnations, but it's not without problems. The main issue is the somewhat digital appearance of the grain that runs rampant in every shot. This could be due to the VC-1 codec struggling to resolve the film grain, giving the image a rather thick look that makes fine detailing problematic at times. However, there's also some signs of noise reduction and sharpening in some scenes, making me think that Universal has been up to its old tricks once again.

But there are still plenty of positives to take away from the 2.40:1 1080p encode, especially when it's watched in motion. Despite the above issues, detailing is always above average thanks to good delineation, and the colour reproduction is excellent – making the most of the hideously '80s fashions and love of pink neon.

Mark Craven: *Scarface* offers two audio options, a lossy DTS 2.0 mix and a new DTS-HD MA 7.1 remix. The former is closer to the original, but sounds rather shrill at times with a harsh top-end. Thankfully, the 7.1-channel remix is generally sympathetic to the material. As well as offering a more balanced tonal range in the dialogue and sound effects, the use of surrounds is mainly there to focus on subtle atmospheric effects and enhancing the score. At least, that's how it goes until Chapter 34 and Tony's last stand, when the entire 7.1 mix kicks up a gear, with the sound of bullets flying all around you and oodles bass accompanying the explosions.

Anton van Beek: As well as a healthy roster of extras sourced from earlier DVD incarnations (including deleted scenes, featurettes about the TV version of the film and the spin-off videogame, and Laurent Bouzereau's original 2001 three-part documentary), Universal has come up with some wonderful new features for this Blu-ray.

Bouzereau contributes a new three-part retrospective with the likes of De Palma, critic Julie Salamon, producer Martin Bregman, filmmakers Eli Roth and Keith Gordon. Even better is the U-Control picture-in-picture track, where they are joined by Stone and Pacino. This includes footage from the TV version and the 1932 original, plus alternate takes from the 'Say chello to my leetle friend' scene. Also included are a *Scarface Scorecard* (it counts the gunshots and 'F-bombs'), *My Scenes*, a BD-Live link and D-Box Motion Code.

Das Boot: Director's Cut

Sony Pictures → All-region BD → £20 Approx



Wolfgang Petersen's WWII submarine movie celebrates its 30th anniversary with this impressive two-disc Blu-ray. While we're missing the theatrical cut offered in the US release, the 208-min Director's Cut is still present. Despite some banding issues, the AVC 1.78:1 1080p encode holds up well compared to films of the same vintage, and the DTS-HD MA 5.1 audio (in German and English) is spectacular. It comes with a commentary, while the second disc includes a tour of the sub, retrospective docs and an archival *Making of*... **MC**

1 2 3 **4** 5

Boyz N the Hood: 20th Anniversary Edition

Sony Pictures → All-region BD
£25 Approx



It's now 20 years since John Singleton's raw account of life in South Central Los Angeles first appeared. Considering its impact and many imitations, it's never been bettered. This Blu-ray platter delivers a slightly soft, but generally accurate AVC 1.85:1 1080p encode with an expansive and powerful DTS-HD MA 5.1 soundtrack. The old commentary, deleted scenes, music videos and *Making of*... are joined by a superb new 28-min retrospective and split-screen audition footage. **AvB**

1 2 3 **4** 5

Super

G2 Pictures → Region B BD
£20 Approx



While it may seem like a cash-in on the success of *Kick-Ass*, James Gunn's *Super* was written many years earlier and stands on its own two feet. Rainn Wilson stars as a mentally-ill man who adopts a superhero persona when his wife leaves him, taking out his anger on local criminals with the aid of a trusty wrench and – eventually – an infatuated comic store worker (Ellen Page) with similar tendencies. As good as it is, the meagre extras are a letdown (a trailer and 19-min *Making of*... featurette) as is the decision to encode it in 1080i, rather than at 1080p like the US release. **AvB**

1 2 **3** 4 5

The Girl... Trilogy: Extended Versions

Momentum Pictures → Region B BD
£45 Approx



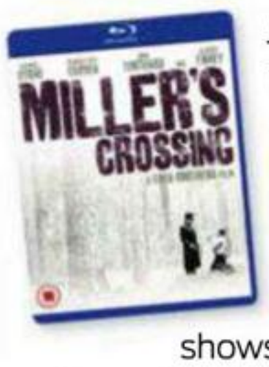
Stieg Larsson's trio of thrillers return to Blu-ray, albeit as a boxset featuring the original Swedish two-part TV version of each story – rather than the theatrical re-edits. This means you get the full 180-min cuts, adding 33 minutes to ...*Dragon Tattoo*, 57 minutes to ...*Played with Fire* and 48 minutes to ...*Hornet's Nest*. The AVC 1080p encodes and DTS-HD MA 5.1 audio are similar to the previous releases, although the first film's 2.40:1 aspect ratio is cropped to 1.78:1 to match the sequels. No new extras, though. **AvB**

1 2 3 **4** 5

'I can't die out here in the woods!'

The Coens' double-crossing mobsters get a timely reappraisal in the HD format

→ Miller's Crossing

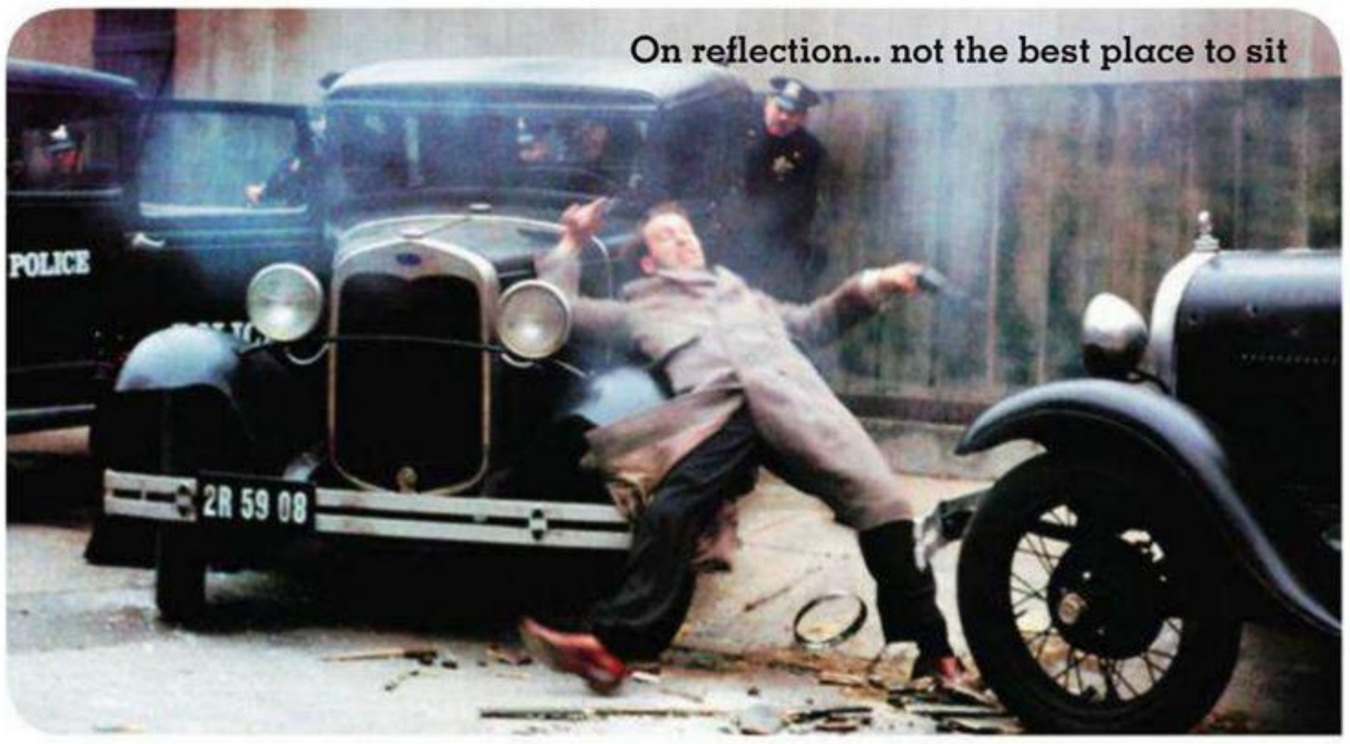


Joel and Ethan Coen's 'handsome film about men in hats' (as cinematographer Barry Sonnenfeld once described it) has never been one of the brothers' most widely acclaimed movies. And yet a quick poll among the *HCC* team, shows that this beautifully shot and often wickedly funny mix of gangster and film noir tropes ranks with the Coens' very best work.

Intricately plotted and brilliantly acted, Miller's Crossing stars Gabriel Byrne as Tom Reagan, the right-hand-man to Irish crime lord Leo (Albert Finney) in an unnamed US city during Prohibition. As if crippling gambling debts and trying to prevent a gang war breaking out with an Italian mob boss wasn't causing Reagan enough problems, he's also carrying on an affair with his boss's main squeeze, Verna (Marcia Gay Harden).

Chris Jenkins: It might not be quite as eye-catching a hi-def transfer as that of the recently released *The Big Lebowski*, but *Miller's Crossing* at least makes it debut on Blu-ray without any obvious digital tinkering. Unlike the aforementioned disc, there's no trace of egregious noise reduction and colour boosting here. Instead, we have a subtly nuanced and very film-like image, with excellent shadow detail and clarity. There's some aliasing in a handful of scenes, but overall this is an impressive treatment of a catalogue title.

Mark Craven: Fox's disc doesn't disappoint in the audio department. Its DTS-HD MA 51. mix delivers atmospherics through the surround speakers that [illegible] panning.



On reflection... not the best place to sit



HCC VERDICT

Miller's Crossing
20th Century Fox →
All-region BD → £20 Approx

We say: Vintage Coen Bros on a gorgeous Blu-ray outing

Picture: 1 2 3 **4** 5
Sound: 1 2 3 **4** 5
Extras: 1 **2** 3 4 5
Movie: 1 2 3 **4** 5

Overall: 1 2 3 **4** 5

On top of that, the dialogue (as important here as in every Coen Brothers film) sounds clean and natural, and is positioned in the mix, while Carter Burwell's haunting score has never sounded so good outside of the studio where it was recorded.

Anton van Beek: Annoyingly for fans, Fox hasn't taken the opportunity to boost the supplementary feature count with this Blu-ray release. Instead, fans get the same meagre offerings that previously appeared on DVD – all presented in 480p. Pick of the extremely slim bunch is a 17-minute chat with cinematographer Barry Sonnenfeld, although there are also a few nuggets of interesting info to be found in the nine minutes of 'Interview Soundbites' with Gabriel Byrne, Marcia Gay Harden and John Turturro. Finally, there's a gallery of 20 behind-the-scenes photos and trailers for *Miller's Crossing* and *Raising Arizona*.

Download Central

Chris Jenkins catches up with Freesat's ITVPlayer and looks at 3D, games and apps downloading. Is there more to downloading than we first thought, he asks?



There's been lots of news in recent weeks about on-demand services, and it's all gone to emphasise that there's more to online than movies and catch-up TV. Sony Europe has announced 3D Experience, a free on-demand streaming service offering a range of promotional video clips and trial content in 3D, available to owners of 3D-capable Sony TVs. The big S plans to expand the service to Blu-ray players and home cinema systems, providing instant access to a range of 3D clips and content from a wide variety of genres, including movies, music, sports, and documentaries. There'll be about 30 titles available at launch, including highlights of Wimbledon 2011, trailers from movies such as *Green Hornet* and *Monster House*, plus 3D music vids. It's even planned to enable users to upload their own 3D productions – presumably shot using Sony 3D camcorders.

Meanwhile, *PC World* has launched a games download service, with 600 titles (for PC only) spanning everything from classics to current best-sellers. There are three download sites available, at pcworlddownloads.co.uk, currysdownloads.co.uk and dixonsdownloads.co.uk.

However, **Samsung claims that video download apps remain the most popular type.** Joining YouTube at the top of the charts are apps such as Vimeo (rated number four in the global charts, number one Latin America); Blockbuster Movies on Demand and Daily Motion. 'It's no surprise that these applications would be at the top of the lists globally and regionally,' reckons Kang-hyun Kwon, Senior VP, Media Solution Centre, Samsung Electronics. 'The TV is a family-based device and people want to lean back and enjoy their time in front of the TV. These apps are the entry point for consumers to discover other experiences on their TV like gaming and social networking, as well as the limitless possibilities being created by our third-party developers.'

On the catch-up service side, Freesat has launched a beta-test version of ITV Player. The subscription-free satellite provider is now the only TV service to offer both



BBC iPlayer and ITV Player, which covers ITV1/2/3/4 programmes, up to seven days after broadcast, with over 100hrs of programmes each week.

ITV Player can be found on channel 903 on the Freesat EPG and will automatically be added via customers' TVs or digital boxes. Initially, it will be only for Humax Freesat HD or Humax Freesat+ digital boxes, with the service being rolled out to other Freesat HD [illegible] in the coming months.

Quatermass and the Pit: Double Play

Optimum → Region B BD → £20 Approx



A wonderful restoration of this classic sci-fi horror for Blu-ray has crafted a sensational AVC 1.66:1 1080p encode that's clearly a massive improvement on all previous releases. The LPCM 2.0 mono is equally beautifully restored and rendered. Impressive extras include almost two hours of interviews about Hammer and Quatermass, a commentary by the writer and director, the 'Sci-Fi' episode of *World of Hammer*, UK and US trailers, alternate US opening credits and a bonus DVD copy of the film itself. ***AvB***

1 2 3 **4** 5

Cannibal Holocaust: Director Edition

Shameless Screen Entertainment → Region B BD → £25 Approx



Ruggero Deodato's video nasty still remains a tough watch due to its scenes of sexual violence and the real slaughter of animals. This disc features the original cut of the film (trimmed by just 15 secs by the BBFC) plus Deodato's new cut that hides some of the violence against critters behind fake print damage. Sadly, both look rough in HD, with the AVC 1.78:1 1080p visuals exhibiting excessive posterization – presumably due to overzealous noise correction. But the DTS-HD MA 2.0 audio is well restored and the interviews offer an interesting analysis. ***AvB***

1 **2** 3 4 5

The Blues Brothers

Universal Pictures → All-region BD → £20 Approx



Universal's patchy track record with catalogue releases continues with this Blu-ray debut of John Landis' cult comedy. But for once it's not because of the image quality. While there are some telltale signs of DNR and sharpening, the AVC 1.85:1 1080p encode still looks much more natural and film-like than other Universal discs like *The Big Lebowski*. However, by squeezing the film (with seamless branching to additional footage) alongside 80 minutes of old DVD extras, Universal has sacrificed lossless audio for regular DTS 5.1 – a major blow for a musical! ***MC***

1 2 **3** 4 5

Modern Family: Complete 2nd Season

20th Century Fox → Region A/B BD → £35 Approx



America's hottest sitcom just gets better with this hilarious second season of dysfunctional family fun, and Fox's HD package raises as many smiles as the show itself. The AVC 1.78:1 1080p encodes for all 24 episodes prove to be sharper, more detailed and generally more satisfying than Sky's HD broadcasts. The DTS-HD MA 5.1 mix is limited by the front-heavy source material, but it can't be faulted on its tonal accuracy. Extras include deleted footage, a gag reel, five behind-the-scenes featurettes and a spoof music video. ***MC***

1 2 3 **4** 5





Showdown with a Shogun

Miike's finely choreographed tale of Japanese warriors is an homage to Kurosawa

→ 13 Assassins

Is the *enfant terrible* of Japanese cinema finally growing up? Probably not. But *13 Assassins* is undoubtedly Takashi Miike's (*Audition*, *Ichi the Killer...*) most assured and mainstream film to date.

A classical yarn, very much in the Kurosawa mould, *13 Assassins* tells the simple story of a small group of samurai facing overwhelming odds as they attempt to kill the current Shogun's sadistic younger brother. All of which culminates in an astonishing 45-minute action sequence as the baker's dozen face off against more than 200 soldiers in a small town. It's breathtaking stuff, brilliantly shot and fantastically choreographed, and it reaffirms Miike as one of cinema's most exciting and unpredictable talents.

Chris Jenkins: Once again, Artificial Eye shows other world cinema distributors how to treat their wares on Blu-ray, delivering a marvellous high-definition version of Miike's latest film, which perfectly captures the original 35mm footage. The AVC 1.85:1 1080p encode favours a fine grain structure, profoundly deep blacks that offer next to nothing in the way of shadow detail and muted colours – all of which is true to the source material. The clarity and sharpness of the image also assists with the limited lighting used throughout the film's first two acts, ensuring that the image doesn't just become a hazy mess





HCC VERDICT

13 Assassins
Artificial Eye
Region B BD → £20 Approx

We say: Miike's superb samurai film cuts a fine figure in high-definition

Picture: 1 2 3 **4** 5
Sound: 1 2 3 **4** 5
Extras: 1 **2** 3 4 5
Movie: 1 2 3 4 **5**

Overall: 1 2 3 **4** 5

Mark Craven: The film's Japanese-language DTS-HD MA 5.1 soundtrack is every bit as good as the image quality (if not a little better). Given the structure of the film (two acts of careful build-up and a final act of non-stop action), the mix can also be broken down into two parts. The first is mainly concerned with dialogue, with surround use limited to atmospheric effects – all of which sounds fine, but is unlikely to get your heart racing. Then comes Chapter 8 and the start of the big battle when everything changes and the soundstage cranks up a gear.

Arrows whistle past your head, explosions send your sub into overdrive and the screams of the dying surround you. It's heady stuff and brilliantly executed on Blu-ray.

Anton van Beek: The Blu-ray serves up an interesting, but rather limited, collection of supplementary features. While the disc only features the shorter 'international cut' of the film, all of the extra footage that appeared in the Japanese cinema release is present in a 24-min reel of deleted scenes. While a lot of it consists of just trims to existing scenes, there are some more substantial pieces including a scene where thieves try to rob Shinrokuro of his gambling winnings, plus a comedic sequence focusing on Koyata's sex drive. The latter is be Miike's personal highlight from the film according to a 19-min interview with the director included on the disc. Finally, there's the UK trailer. All of the extras are presented in high-definition.

Demo screen

Give your home cinema a license to thrill with this breathtaking chase scene from **Casino Royale**







Casino Royale: Deluxe Edition

Sony Pictures Home Entertainment → All-Region BD → £20 Approx

Time code: 009.38 - 019.06

The production team certainly had its work cut out with this astonishing action scene from 2006's *Casino Royale*. Here was a sequence that would not only introduce a new Bond to cinema audiences worldwide, but would also prove that the franchise had what it took to compete with the latest breed of Hollywood action cinema ushered in by *The Bourne Identity*.

To say that director Martin Campbell (and second unit director Alexander Witt, who actually shot all of the building site material) succeeded is to drastically undersell what is undoubtedly one of the best action scenes in modern cin[illegible]

one of the best Blu-ray demo discs you can spin in your home cinema system.

Double-oh-heaven

The first thing to hit you is the Blu-ray's stunning, sun-drenched AVC 2.40:1 1080p encode with its rich colours, insanely detailed textures and sensational clarity – all of which ensure that you can tell that these are genuine stunts you're watching unfold on screen, and not the usual CGI effects.

Then there's the astonishing Dolby TrueHD 5.1 soundtrack. From the crowd noises that surround you during the snake fight, to the room-shaking bass that sweeps from the front to the rear of the soundstage as an acetylene tank explodes, and the precision and directionality of the gunfire in the Nambutu Embassy, every element of the mix excels.

It all adds up to an astonishing sequence that not only cemented Daniel Craig as 007, but – with this Blu-ray release – reminded films fans why the Bond franchise will always be a true home cinema favourite



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RADIUS R90 HD10



BRONZE BX2 5.1



APEX

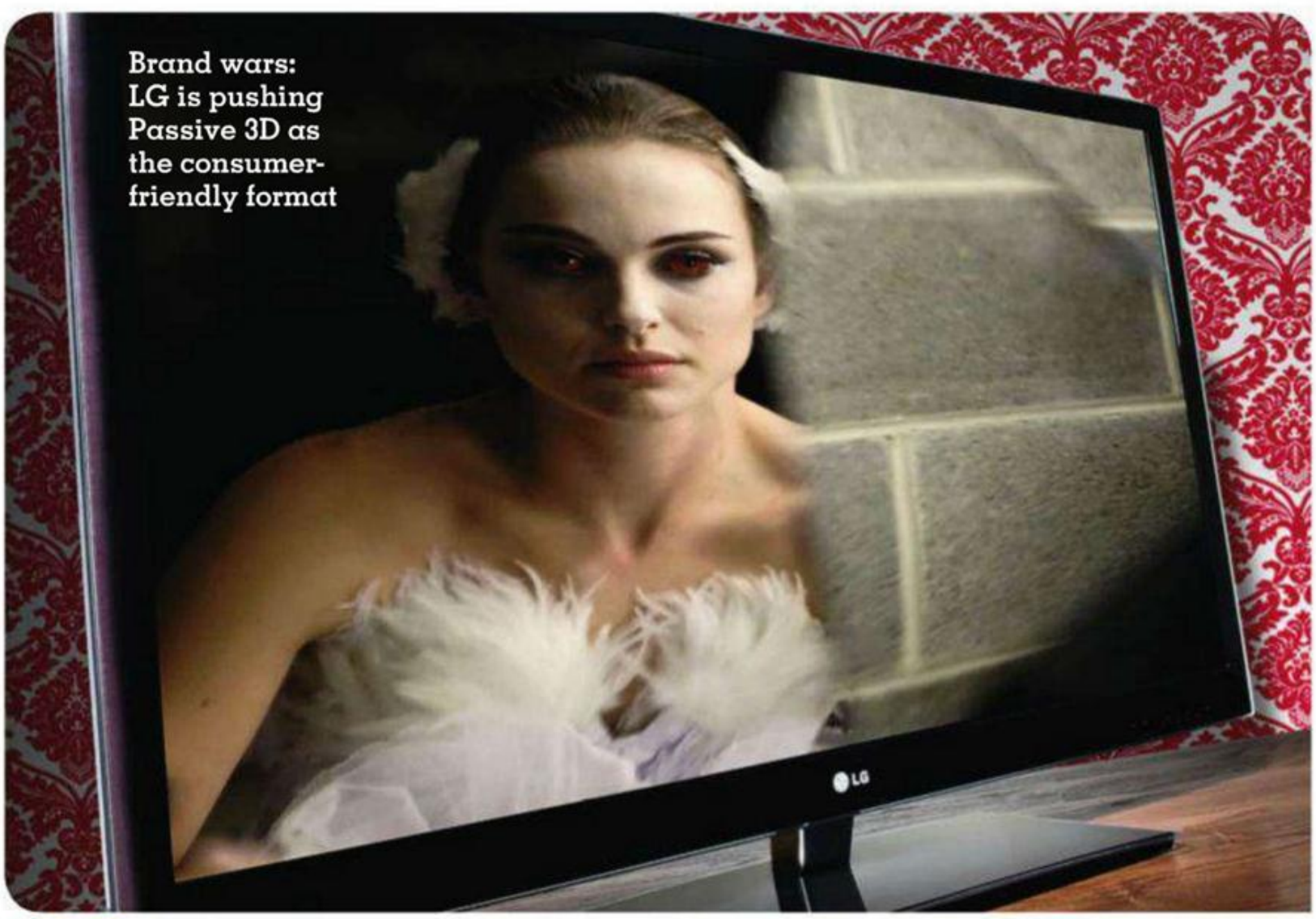
Please Note: Some brands/products are not available at all stores. Special/added value items are not in conjunction with any other offers.

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Feedback

Got an axe to grind? Want to comment on current technology? Need to share? **HCC** is here to help


Brand wars: LG is pushing Passive 3D as the consumer-friendly format

Format war? Pah!

I've just read a big article about a 3D format war between Active and Passive 3D TVs (*HCC* #198). How can there possibly be a format war when the content and AV equipment are compatible with either technology? It's like saying there's a format war between plasma and LCD, it's utter nonsense. The 3D glasses only work with the same brand TV, so that isn't even an issue. Please cut out the hyperbole and sensationalism and focus on important issues, like why do I have to pay twice as much for my AV equipment and content than almost anywhere else in the world?
Russell Hogan, Surrey

We have to disagree with you Russell. Yes, the content

Star Letter

Triple-Play Blu-rays aren't for me

I hate downloadable copies of movies. Firstly, I'm probably paying more for it, and, secondly, if I buy the Blu-ray, why is my download standard-def instead of HD? I think it's stupid, especially the Triple-Play. I buy a Blu-ray, and get a digital copy which I don't want (AnyDVD or DVDfab can rip DVDs and Blu-rays so why a digital copy?). And don't get me started on a DVD, I obviously have a Blu-ray player, as I bought the Blu-ray and not the DVD. So why the hell would I want it? Just sell the Blu-ray cheaper and forego the others. Or kill a single DVD copy, and sell Blu-ray and DVD bundled and no other release, which would drive the price down a bit.

Lastly, the Star Letter in *HCC* #196: 'why do people go to such silly lengths with media?' I have an AC Ryan media player with a 10-input USB hub and eight 2TB drives, all to encompass all my movies and TV series from DVD, and the picture, through my Marantz amp and Panasonic projector, is exceptional. Why bother with Edge Video processors, etc?

I love movies. I don't have to spend way too much cash on silly things when my system is that good. Spend it on Blu-rays, it makes far more sense.
Michael O'Grady, via email

It's obvious that Triple Play Blu-rays aren't going to be to everyone's taste, but we think they represent great value – a look online shows new titles selling for £14, so even if you don't want the DVD or digital versions you're not exactly getting ripped off. And we're pretty certain you can buy standalone Blu-rays, too. However, we like your suggestion of doing away with single DVD copies. Studios would save money on packaging and distribution costs, and everyone would be forced to at least own a BD copy. Then HD would really take off!



Winner: Star Letter-writer Michael wins a copy of *The Girl Trilogy: Extended Versions* on Blu-ray courtesy of Momentum Pictures. It's available to buy now, priced at £50 approx.

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Don't be an Alan Smithee! Joining *Home Cinema Choice*'s online community is free, fast and fun

On the home page of **www.homecinemachoice.com**, scroll down the right-hand side of the page until you see the Login box. Click the *Join Here* button, choose a username and then create your profile. You can upload an image to represent you online and use your signature to tell fellow AV fans about your own system automatically every time you post. Joining the big AV debate online has never been easier!



Write to Letters, Home Cinema Choice, Future Publishing, 2 Balcombe Street, London NW1 6NW, or email us at hcc@futurenet.co.uk
Due to the volume of letters we receive we cannot guarantee to print/answer them all.

(broadcast 3D, 3D Blu-ray) and AV equipment (Sky receiver, 3D Blu-ray player) are compatible with both Active and Passive 3DTV displays, but the way the content is displayed differs – only Active 3DTVs will deliver full HD 3D. The 'war' here comes from rival brands, say LG and Samsung, criticising each others' approaches, which can lead to confusing customers as to which system is best for them.

Don't dismiss Dune

I was surprised to read Martin Pipe's description of the Dune Smart B1 as a 'Blu-ray player that's a little bit different'.
I see it as a media player with the optional BD-ROM drive installed. This may sound like a trivial distinction, but it's important in understanding Dune's product line. For a start, it explains why the Dune has eSata ports, a BitTorrent client and optional modules like other media players. Media players are normally unable to play BD discs using external drives due to licensing issues, so Dune offers the option of a built in BD-ROM drive and a Smart BE extension module for those users who don't want to also buy a separate Blu-ray player. Other users can choose configurations to match their specific home cinema/network. In my case, I choose to rip my movies to a server using a lossless BD ISO format, thereby preserving all the high-definition and protecting the discs against little fingers.

The Dune is one of the few media players able to play BD ISOs with full menus. And yet t[illegible]

mention in Martin's review. It will also play my audio collection in open source FLAC rips, again unlike standard BD players from companies like Sony and Panasonic. Therefore it is not surprising to find that Dune describes their units as 'HD Media players' and not as BD players. Surely we can recognize that HD media players are not just BD players with a little difference.
Ion Mitchell, via email

Sorry if you think we've done the Dune player a disservice. Blu-ray player or Media player, we really do rate it very highly. Now, fess up, you work for Dune, don't you?

Ratio rant

Just read The Beek's column in *HCC* #198, to which I am a long time subscriber. Whilst I don't always subscribe to his choice of movies, there is a topic that you raised in this issue about which I fully concur . That is the matter of aspect ratios on the re-released Blu-ray versions of various flicks. It is infuriating to find that the studios will go to the enormous trouble and cost of releasing the hi-def versions, often with new sound codecs etc, only to find that the picture has been revised onto the wrong aspect ratio – in particular, as you say, to 16:9 instead of 2.35:1 etc.

Very recently, I purchased the *The Godfather* trilogy on Blu-ray. I already own the standard-def version, which portrays the movies in their original aspect ratios. If I am not mistaken all three original movies are in wide aspect r[illegible]tio (although admittedly [illegible]s a Region 1 set). What have we got now? Yup, it's the dreaded 16:9! Whilst 16:9 was a massive improvement over 4:3, it is now such old hat that in this day and age of widescreen TVs and projectors, there is no excuse for not re-mastering the original releases to conform to the format their directors intended.

The Godfather (and its sequels) has to be arguably the classic gangster movie series of all time and standard-setter for others of the genre. The studio (Paramount, in this case) has let itself down by failing to conform to the cinemascope ratio. Maybe a call from The Beek, as per his broadside to Warner, would go a long way towards getting a correction to this flawed release. I should have thought that a director of the vintage and reputation of Francis Ford Coppola would have seen to this at the outset, given that *The Godfather* was his baby!
Ivor O Phillips, via email

While we're glad that you agree with The Beek on aspect ratios, we must point out that all three of *The Godfather* movies were originally shot at 1.85:1, so, while they do appear on the Blu-ray release at 1.78:1, it's hardly the most extensive hacking job around.

Censorship I

Regarding the poll on censorship on the *HCC* website, I would like to ask those who agree with film censorship a question – why do you agree with it? Do you think a fully-grown adult should have their right to decide what to watch taken away from them?

I refuse to believe so many people believe in censorship. Move to China, folks!
Anonymous, via the website

Censorship II

As far as I am concerned there is no complexity at all. There is no circumstance that makes censorship okay. Once you go down that road, even with the best of intentions, it always tends to become worse. Censorship is objectionable under any circumstance, you always have the option of not watching a film if you find the content objectionable.
Anonymous, via the website

Well, that's settled that, then. Everyone hates censorship, and we should be allowed to watch whatever we like. Even if it's the real-life torture and murder of fluffy little kittens.

And finally...

Possible nausea, dizziness, headaches, crosstalk, dimming of the image, black out when the head is tilted, loss of full HD, exorbitantly expensive glasses which are uncomfortable to wear, and yes, the tiresome business of wearing glasses. What is this new technology being pushed by the manufacturers? 3DTV.
It's supposed to give greater realism, but it does not, because we do not see reality framed as on a TV set, but with peripheral vision. Nor does it add anything to most movies, except perhaps such spectaculars as *Avatar*, which anyway work best on a cinema screen such as IMAX. Now we are told that the manufacturers are working on 3DTV without glasses, thus rendering the 120,000 sold during 2010 redundant. Is this called progress?
Roger Payne, via email



3D showcase: *Avatar* is a good example of the tech

How we test

Home Cinema Choice's hardware reviews combine the subjective opinion of our seasoned reviewers with hard technical data. **Chris Jenkins** explains how the *HCC* Tech Labs work

HCC hardware reviews combine the opinions of our experienced reviewers with objective technical data from our test lab. Here's how we do it...

HCC's gear reviews have a long tradition of combining the subjective opinions of experienced reviewers with hard scientific data from our test labs. That way, you can be sure that there's no danger of favouritism or prejudice creeping into the reviews – when we combine the reviewer's opinions with the test data, we can be sure that the results we present to you, the readers, are honest, reliable and accurate.

For over 20 years, we have been developing testing methods for every AV technology from CRT TV and VCRs to the latest 3D flatscreens, multichannel amplifiers and media players. Our testers have been trained by the ISF, Tektronix, Home Acoustic Alliance and other industry bodies, and we use industry-standard testing equipment so we can be confident our results make sense in terms of manufacturers' claims.

Our Tech Labs set-up consists of two main facilities.

The Viewing Room

Used mainly for testing TVs, projectors and speakers, the Viewing Room is designed to reproduce the conditions found in a typical mid-range home cinema installation. Created by award-winning custom installers Pounds (www.poundstv.co.uk), it's completely light-proofed for testing of TVs and projectors, is partially soundproofed using Acoustiblok (www.acoustiblok.com), and has been acoustically treated and tuned using custom absorbers and diffusers by the experts at RPG (www.rpg-europe.co.uk).

The room has a resident Crystal Acoustics TX-T2 7.2 speaker system, Onkyo TX-NR5008 receiver and a Screen Research 100in projection screen. TVs, projectors and other AVRs are moved in as needed for testing. We use a TV stand from Gecko (www.gecko-furniture.co.uk) for mounting flatscreens. A Philips 46PFL9705H TV is used for 3D movie and games playback. The room is fully cabled with speaker, HDMI, and interconnects from Peerless. XLR cables are from Atlas cables. Multiple displays can be fed from the same source using a Gefen 2-in-4-out HDMI switcher/splitter.

The testing equipment used for TVs and projectors is the Chroma5Pro meter and ChromaPure Pro software supplied by Kalibrate Ltd (www.kalibrate.co.uk).

This sophisticated tristimulus colorimeter and analysis software allows us to measure functions such as contrast ratio, colour temperature and luminance, all essentials in picture performance.

The Test Lab

Mainly used for performance analysis of amplifiers and players, the Test Lab is equipped with an Audio Precision APX585 multichannel analyser. This generates programmable test signals, and runs a huge range of tests of functions such as output power, frequency response and distortion. It also has digital audio test functions. A Tektronix VM700 is used for analysis of analogue video signals.

Cables for the test system are again from Peerless.

In addition to the main test units, we use a number of audio and video signal generators from Sencore and Snell & Wilcox, analogue test equipment such as a oscilloscope, mains power meters from Maplin, a library of test and measurement DVDs and Blu-rays (plus all the newest software releases), and standardised digital files for media players.

Tech Lab tests explained

TV power consumption: Watts



White screen: This is a measurement of a display's power consumption in Watts when displaying a pure white 100IRE signal with muted audio



Test footage: Here the power consumption is measured with a looped test sequence of live footage (complete with explosions!) and the audio volume up

TV contrast: ratio



Picture: Contrast ratio claims by TV manufacturers are often extravagant, and don't follow an established standard. Our real-world measurements cut through the hype and allow one brand's contrast to be compared with another in a consistent way

Colour temp: Kelvin



Presets: Most TVs default to a picture setting, which is too bright and 'hot' (blue), in order to make them look good in shops, but also have a choice of colour temperature presets. We tell you which of these gets closest to the industry standard setting of 6,500K (D65)

Blu-ray/DVD power consumption: Watts



Idling: By EU regulation, standby power consumption for most devices is now under 1W, so we don't usually measure this; but the consumption when power is on can be considerably higher, so we measure this for DVD and Blu-ray players and some other devices



Playing: When a disc is spinning, the device's power consumption usually rises, so we measure when playing a standard disc. In theory, media players should display no change in consumption when playing

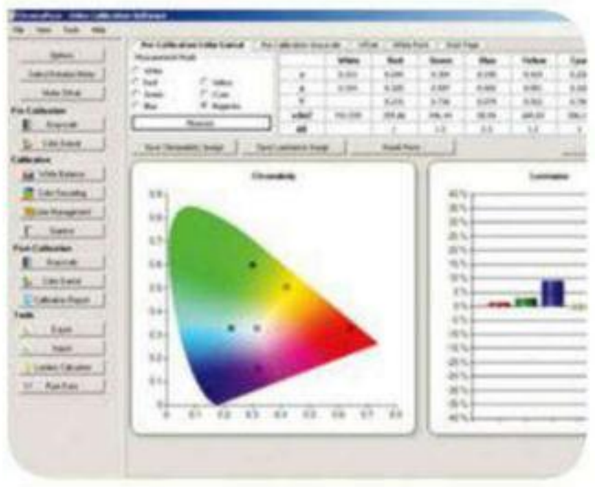
Audio Jitter: Ps



Sound: The analogue audio jitter from a device such as a Blu-ray player is measured in picoseconds. The lower the number, the better. Though analogue audio output is perhaps rarely used, jitter is often a good indicator of the general build and component quality of many devices







Test bench: The Viewing Room (above) simulates a typical home cinema, while the MSI laptop runs test software for the APX585 analyser (right) and ChromaPure system (above right)





For testing of media software and portable testing applications, we use an MSI GT640 laptop PC with HDMI output and SRS sound.

Results

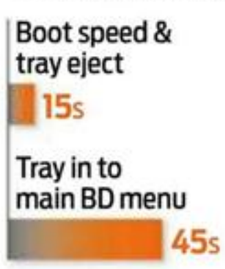
All this testing generates a huge mount of data, which is fed into product reviews and stored on our database. From this we can establish performance averages which help us to keep our scoring realistic. Of course, this mass of information is too unwieldy and detailed to publish in the magazine unedited, so our next job is to present it in a way which is meaningful and easy to understand. Our graphical presentations (see below) should make it all more digestible. So, while one key reviewer is normally by-lined for our tests, the whole team will have been involved in bringing you results you can rely on

Video Jitter: Ns



Vision: Again, the analogue video jitter of a DVD or BD player may be less relevant when the digital output is normally used, but it is a good indicator of general build and component quality. We also measure other video quality indicators such as chroma crosstalk and frequency response at 5.8MHz

Loading: Boot/Java



Disc loading & Java: Blu-ray disc players can be annoyingly slow to load and play discs, thanks mainly to the DRM and Java content. We measure times from power on to tray opening, and tray in to boot menu on a standard

AVR power: Watts

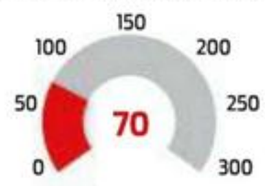


Powered: Power consumption of an AV amp can be high, but it's a requirement of decent output levels. We measure consumption in two states, when idle, and when loaded with a multichannel surround system

Amp output power: Watts (8Ω , 0.5% THD)



2-channel 8Ω: Manufacturers' claims for amplifier output power can be wildly exaggerated, and testing standards vary widely. Our tests deliver a figure for stereo performance with an 8Ω load, and quote a Total Harmonic Distortion result



5-channel 8Ω: In most cases, multichannel performance will not match up to the two-channel figure. We push the products to its limit in multi-channel mode and quote the figure reached before unacceptable distortion results

Pure power: Watts



Fidelity firewall: This is our way of measuring an amp's output power ability before it is tainted by distortion. We measure at 1KHz with an 8Ω load to 0.05% THD to get an indication both of output power and component quality

Signal/noise: dB



S/N tests: These amp measurements reveal the ratio of signal to noise at a specific frequency. Low, mid and high readings are taken to determine the imaging and sonic character of the amp

infra-red blues?

Keene IR anywhere - designed to maximise control of your AV equipment



local IR control





internet capable devices

infra red

IP

RS232



direct IR control of AV equipment



feed IR output into other IR distribution systems



IP commands relayed to other network devices



RS232 controllable matrix switchers



X10 lighting and appliances

The Keene IR Anywhere family of products give you easy internet control of any Infra Red or RS232 products. There are many ways to use them, for example;

Use two modules with one set to act as IR receiver and one to act as an IR transmitter and connect them both to your network. Aim your remote at the receiver and it will convert the signal to packet data, send that data to the receiver which will decode the data and retransmit the IR as originally received. You can do this whether the receiver is in the next room or on the other side of the world!

Use a KIRA128 with the free Democontrol App and use your iPhone or iPad to control your AV equipment from anywhere you have an internet connection. Or use any web browser on any internet capable device with the built-in web pages.

Install the IR Commander Matrix and enjoy selective, routable control of multiple devices

The possibilities are endless! Please see www.keene.co.uk for full details

The IR inputs and outputs are fully compatible with the existing Keene IR Distribution range so other styles of receivers and emitter wands can easily be incorporated.

- **Control IR equipment via local network or anywhere in the world via internet**
- **Can be combined with IR distribution system for large installations**
- **One-to-one or many-to-one control**

Product code	IR over IP	Web Browser Control	Code Storage	RS232	Routable Outputs
KIRA	y	y	4	n	n
KIRA128	y	y	128	n	n
[illegible]	y	y	128	y	n
[illegible]M	y	y	128	y	y

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SELECT

→ Buying Guide Looking to purchase a new TV, AVR, speaker set, PJ, media player, BD deck, or surround sound system? Our Buying Guide is here to help. It's updated every issue with the latest reviews, and highlights the major specs so you can see at a glance what kit is right for you. And remember that the prices listed are the original RRPs – shop around and you'll often find them for less!



HCC Ratings key

Officially awesome	1 2 3 4 **5**
Essential purchase	1 2 3 **4** 5
Does the job	1 2 **3** 4 5
Disappointing	1 **2** 3 4 5
Don't touch it	**1** 2 3 4 5

TV screens



Manufacturer	Model	Price	Size (inches)	3D type	Panel type	HDMI	Component	PC	Networking	Internet TV	Wi-fi ready	Freeview HD	Freesat HD	Issue	Rating	Comment
LG	50PZ950T	£1,600	50	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊖	196	1 2 3 4 5	Excellent all rounder, minor judder
LG	47LW550T	£1,200	47	P	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	194	1 2 3 4 5	Web brower is multimedia icing
LG	50PX990	£1,600	50	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊖	192	1 2 3 4 5	Adds 3D to the 50PK990
LG	50PK990	£1,300	50	–	PDP	4	1	1	⊕	⊕	⊕	⊕	⊖	187	1 2 3 4 5	Image retention needs managing
LG	47LD950	£2,500	47	P	CCFL	4	1	1	⊖	⊖	⊖	⊖	⊖	186	1 2 3 4 5	Lite spec and poor 3D Blu-ray pics
Loewe	Individual 40	£5,500	40	–	LED	3	1	1	⊕	⊖	⊖	⊕	⊖	192	1 2 3 4 5	Exquisite design and performance
Panasonic	TX-P55VT30	£2,700	55	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊕	197	1 2 3 4 5	Sublime plasma is best-in-class
Panasonic	TX-L37DT30	£950	37	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊕	196	1 2 3 4 5	Do-it-all 3D capable thin screen
Panasonic	TX-P50GT30	£1,800	50	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊕	195	1 2 3 4 5	Stunning 2D and 3D mid-ranger
Panasonic	TX-P42VT20	£1,800	42	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊕	190	1 2 3 4 5	Wireless networking as it should be
Panasonic	TX-P42ST30	£1,200	42	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊖	198	1 2 3 4 5	Entry-level 3D plasma
Panasonic	TX-P50V20	£1,600	50	–	PDP	4	2	1	⊕	⊕	⊕	⊕	⊕	188	1 2 3 4 5	Every bell and whistle apart from 3D
Panasonic	TX-L42D25	£1,200	42	–	LED	3	1	1	⊕	⊕	⊕	⊕	⊕	187	1 2 3 4 5	LED debut scores well visually
Panasonic	TX-P65VT20	£4,800	65	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊕	186	1 2 3 4 5	Awesomely good big-screen pics
Philips	40PFL8605	£1,300	40	A	LED	4	1	1	⊕	⊕	⊕	⊖	⊖	192	1 2 3 4 5	Accomplished 2D pics. Poor X-talk
Philips	Cinema 21:9	£4,000	58	A	LED	4	1	1	⊕	⊕	⊕	⊖	⊖	190	1 2 3 4 5	Faultless movie viewing
Philips	46PFL9705	£2,500	46	A	LED	4	1	1	⊕	⊕	⊕	⊖	⊖	189	1 2 3 4 5	Networking includes web browser
Samsung	UE40D6530	£1,100	40	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	198	1 2 3 4 5	Brilliant pictures and Smart skills
Samsung	UE40D7000	£1,400	40	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊕	197	1 2 3 4 5	Gorgeous TV, superb performance
Samsung	UE55D8000	£2,500	55	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊕	196	1 2 3 4 5	Minor 3D X-talk, otherwise stunning
Samsung	UE46C8000	£1,700	46	A	LED	4	1	1	⊕	⊕	⊖	⊕	⊖	192	1 2 3 4 5	Black levels fail to spoil super pics
Samsung	PS50C6900	£1,300	50	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊖	191	1 2 3 4 5	Great value for money, decent pics
Samsung	PS51D6900	£1,000	51	A	PDP	4	1	1	⊕	⊕	⊕	⊕	⊖	198	1 2 3 4 5	Aggressively priced 3D bigscreen
Samsung	UE65C8000	£5,000	65	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	190	1 2 3 4 5	World's largest 3D LED screen
Samsung	UE55C9000	£7,000	55	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	185	1 2 3 4 5	Superb designer set – spectacular!
Sharp	LC-37LE320	£700	37	–	LED	3	1	1	⊖	⊖	⊖	⊖	⊖	194	1 2 3 4 5	Tasty set suited to a second room
Sharp	LC-46LE831E	£1,300	46	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	199	1 2 3 4 5	Sharp's best LED screen ever
Sharp	LC-60LE925E	£3,500	60	A	LED	4	1	1	⊕	⊕	⊕	⊖	⊖	189	1 2 3 4 5	Outstanding colours but bad X-talk
Sony	KDL-40EX524	£800	40	–	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	197	1 2 3 4 5	Great features, decent 2D-only pics
Sony	KDL-40NX713	£1,000	40	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	193	1 2 3 4 5	Needs optional transmitter for 3D
Sony	KDL-40NX703	£1,000	40	–	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	192	1 2 3 4 5	Looks great in white as well as black
Toshiba	42RL853	£600	42	–	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	199	1 2 3 4 5	Affordable 42incher with few frills
Toshiba	46VL758	£1,500	46	–	LED	4	1	1	⊕	⊖	⊕	⊕	⊖	192	1 2 3 4 5	Undone by inconsistent backlight
Toshiba	55WL768	£1,850	55	A	LED	4	1	1	⊕	⊕	⊕	⊕	⊖	191	1 2 3 4 5	HD good, 3D bad. Basic online stuff

A= Active. P= Passive

TV SCREENS EXPLAINED...

PLASMA VS LCD. PLUS, 3D'S RIVAL SYSTEMS

The TV market is becoming increasingly dominated by LED-lit LCD screens that are much thinner than traditional cold cathode fluorescent lamp (CCFL) screens. For 42in and above, plasma display panels (PDPs) come into play. These generally offer superior black levels, better viewing angles and less 3D cross-talk, but less brightness.

Most 3D screens feature the Active system that uses expensive powered 3D specs to deliver full HD images to each eye. Passive 3D TVs have a filter over the screen and use non-powered specs with polarising filters. The ...sses are cheap as chips but the resol... of 3D is halved to 540 lines.

Editor's Choice...



SAMSUNG

55in → UE55D8000 → £2,500 Approx

Samsung's cost-no-object 9000 series launched in 2010 but still tops the brand's range – however, if you want Samsung's most technologically advanced screen then look no further than its 2011 8000 series. Stunning looks with pics to match.

Tested: Issue 196
For more info visit: www.samsung.co.uk

Blu-ray players



Manufacturer	Model	Price	BD Live storage	3D	Multi-channel analogue out	HDMI	USB	Online portal	Wi-fi ready	DVD-Audio/ SACD	Issue	Rating	Comment
Anthem	BLX 200	£600	⊕	⊖	⊖	1	⊕	⊖	⊖	⊖/⊖	183	1 2 3 4 5	**Lacks legacy AVR support but images are super**
Arcam	FMJ-BDP100	£1,000	⊖	⊖	⊖	1	⊕	⊖	⊖	⊖/⊖	194	1 2 3 4 5	**Rock-solid build quality and pics to match**
Cambridge Audio	Azur 650BD	£400	⊕	⊖	⊕	1	⊕	⊖	⊖	⊕/⊕	184	1 2 3 4 5	**Top-notch build pays dividends with 2D fodder**
Cambridge Audio	Azur 751BD	£800	⊕	⊕	⊕	2	⊕	⊕	⊕	⊕/⊕	199	1 2 3 4 5	**Universal deck performs well, needs more 'net**
Denon	DBP-1611UD	£400	⊕	⊕	⊖	1	⊕	⊕	⊖	⊕/⊕	194	1 2 3 4 5	**Awful GUI but 3D pics are as good as it gets**
Denon	DBP-2012UD	£750	⊕	⊕	⊕	1	⊕	⊕	⊖	⊕/⊕	198	1 2 3 4 5	**High-performance player with battleship build**
Denon	DVD-A1UD	£4,500	⊕	⊖	⊕	2	⊕	⊖	⊖	⊕/⊕	178	1 2 3 4 5	**Unsurpassed reference quality audio and pics**
Denon	Cara	£2,000	⊖	⊖	⊖	4	⊕	⊖	⊖	⊖/⊖	185	1 2 3 4 5	**With built-in 5 x 75W digital amp**
Dune	Smart B1	£240	⊖	⊖	⊖	1	⊕	⊕	⊕	⊖/⊖	198	1 2 3 4 5	**Advanced networking features will wow techies**
LG	BX580	£150	⊖	⊕	⊖	1	⊕	⊕	⊕	⊖/⊖	189	1 2 3 4 5	**Reasonable BD pics, messy DVD upscaler**
LG	BD570	£200	⊖	⊕	⊕	1	⊕	⊕	⊕	⊖/⊖	186	1 2 3 4 5	**Speedy loading and highly multi-media capable**
LG	BD670	£170	⊖	⊕	⊖	1	⊕	⊕	⊕	⊖/⊖	199	1 2 3 4 5	**Smart BD player offers great value**
NAD	M56	£1,900	⊖	⊖	⊕	1	⊕	⊖	⊕	⊖/⊖	183	1 2 3 4 5	**Motion processing issues spoil the day**
Onkyo	BD-SP808	£500	⊖	⊖	⊖	1	⊕	⊖	⊖	⊖/⊖	195	1 2 3 4 5	**Accomplished disc spinner. Slow disc loader**
Oppo	BDP-95EU	£900	⊕	⊕	⊕	2	⊕	⊖	⊕	⊕/⊕	197	1 2 3 4 5	**Even better build and results than the BDP-93EU**
Oppo	BDP-93EU	£500	⊕	⊕	⊕	2	⊕	⊖	⊕	⊕/⊕	195	1 2 3 4 5	**Awesomely good video and music performance**
Oppo	BDP-83SE	£1,300	⊖	⊖	⊕	1	⊕	⊖	⊖	⊕/⊕	190	1 2 3 4 5	**Precision engineered analogue audio output**
Panasonic	DMP-BD75	£110	⊖	⊖	⊖	1	⊕	⊖	⊖	⊖/⊖	196	1 2 3 4 5	**OK images, quick loader, underwhelming to use**
Panasonic	DMP-BDT310	£260	⊖	⊕	⊖	2	⊕	⊕	⊕	⊖/⊖	194	1 2 3 4 5	**Terrific new GUI, refined sound and pictures**
Panasonic	DMP-BDT300	£260	⊖	⊕	⊕	2	⊕	⊕	⊕	⊖/⊖	194	1 2 3 4 5	**Versatile, aging deck. Look out for discounts**
Panasonic	BFT800EBK	£650	⊕	⊕	⊖	1	⊕	⊕	⊕	⊖/⊖	192	1 2 3 4 5	**Built-in soundbar and iPod dock. Great 3D pics**
Philips	BDP7600	£200	⊖	⊕	⊕	1	⊕	⊕	⊕	⊖/⊖	198	1 2 3 4 5	**Feature-heavy deck with open web browser**
Philips	BDP7500 MKII	£200	⊕	⊕	⊕	1	⊕	⊕	⊕	⊖/⊖	194	1 2 3 4 5	**Slickly designed with decent 2D and 3D images**
Pioneer	BDP-LX53	£400	⊖	⊖	⊖	1	⊕	⊖	⊖	⊖/⊖	187	1 2 3 4 5	**Basic and slow to load but impressive BD pics**
Samsung	BD-D7500	£250	⊕	⊕	⊖	1	⊕	⊕	⊕	⊖/⊖	198	1 2 3 4 5	**Style-centric wall-mountable 3D player**
Samsung	BD-D6900	£300	⊖	⊕	⊖	1	⊕	⊕	⊖	⊖/⊖	195	1 2 3 4 5	**Decent BD deck with built-in Freeview HD tuner**
Samsung	BD-C6900	£255	⊕	⊕	⊕	1	⊕	⊕	⊕	⊖/⊖	194	1 2 3 4 5	**Quick loader, versatile deck. Passable pictures**
Sharp	BD-HP90S	£290	⊕	⊕	⊖	1	⊕	⊕	⊕	⊖/⊖	194	1 2 3 4 5	**Slot-loading vertical design, expensive**
Sony	BDP-S380	£130	⊖	⊖	⊖	1	⊕	⊕	⊕	⊖/⊕	199	1 2 3 4 5	**Budget player misses out on 3D and networking**
Sony	BDP-S480	£150	⊖	⊕	⊖	1	⊕	⊕	⊕	⊖/⊕	198	1 2 3 4 5	**Brilliant deck offers superior VOD at a low price**
Sony	BDP-S570	£160	⊕	⊕	⊖	1	⊕	⊕	⊕	⊖/⊕	185	1 2 3 4 5	**Supreme quality deck; plenty of web content**
Toshiba	BDX3100	£185	⊖	⊕	⊖	1	⊕	⊕	⊖	⊖/⊖	194	1 2 3 4 5	**Feature-light but does the job with solid pics**
Toshiba	BDX3200	£150	⊖	⊕	⊖	1	⊕	⊖	⊖	⊖/⊖	197	1 2 3 4 5	**Unexciting player can't compete with rivals**
Yamaha	BD-S667	£300	⊖	⊕	⊖	1	⊕	⊖	⊖	⊖/⊖	189	1 2 3 4 5	**Impressive but best partnered to a Yamaha AVR**

BLU-RAY EXPLAINED...

MATCHING YOUR DECK TO YOUR AMP

Blu-ray decks are designed to deliver top-notch images (some do it much better than others of course) but Blu-ray is also about enjoying superior quality sound. When choosing a deck, bear in mind the connectivity and decoding features of your amplifier. If it's an older model that doesn't have HDMI inputs then you'll need a BD player with multichannel analogue audio outputs to enjoy hi-res surround sound formats. Most current AVRs have HDMI inputs that accept bitstreamed Dolby TrueHD and DTS-HD MA, but not all receivers can cope with 3D video signals, in which case you'll need a deck with dual HDMI outputs – one for the amp, one for the TV.

Editor's Choice...

PANASONIC

DMP-BDT310 → £260 Approx



This second-gen 3D deck improves on its BDT300 predecessor thanks to new tricks and a lower asking price. Standout features – alongside the excellent 2D and 3D playback – are Skype functionality, 2D-3D conversion, faster loading times and a revamped GUI that takes usability to the next level. Motion-sensitive controls bring even more to the party.

Tested: Issue 194
For more info visit: www.panasonic.co.uk

AV Receivers



Manufacturer	Model	Price	Claimed power	THX	Multi-ch in	HDMI in	HDMI out	3D	Dolby True HD	DTS HD MA	Networking	Net tuner	Issue	Rating	Comment
Anthem	MRX 700	£2,100	7 x 120W	⊖	⊖	4	1	⊕	⊕	⊕	⊖	⊖	195	4	Complex set-up, great EQ sound
Arcam	AVR400	£1,700	7 x 90W	⊖	⊕	5	1	⊕	⊕	⊕	⊕	⊖	194	4	Beautifully built. Ace analogue audio
Denon	AVR-4311	£2,000	9 x 170W	⊖	⊕	6	2	⊕	⊕	⊕	⊕	⊖	193	5	Polished audio, Airplay streaming
Denon	AVR-1611	£350	7 x 110W	⊖	⊖	4	1	⊕	⊕	⊕	⊕	⊖	191	4	Uses binding posts. Decent sound
Denon	AVR-2311	£800	7 x 135W	⊖	⊖	6	1	⊕	⊕	⊕	⊖	⊖	190	4	iPod dock but no networking
Marantz	SR7005	£1,400	7 x 125W	⊖	⊕	6	2	⊕	⊕	⊕	⊕	⊖	187	5	Great home cinema amp
Onkyo	TX-NR609	£500	7 x 60W	⊕	⊖	6	1	⊕	⊕	⊕	⊕	⊕	195	5	Comprehensive, stunning performer
Onkyo	TX-NR5008	£2,400	9 x 140W	⊕	⊕	8	2	⊕	⊕	⊕	⊕	⊕	191	4	Versatile and capable of brilliance
Onkyo	TX-SR308	£250	5 x 100W	⊖	⊖	3	1	⊕	⊕	⊕	⊖	⊖	191	3	Under specified and under powered
Onkyo	TX-SR608	£450	7 x 160W	⊕	⊖	6	1	⊕	⊕	⊕	⊖	⊖	184	4	Dynamic sound, decent features
Pioneer	VSX-520	£300	5 x 130W	⊖	⊖	3	1	⊕	⊕	⊕	⊖	⊖	191	4	Decent sound; spring-clip terminals
Pioneer	SC-LX83	£2,000	7 x 190W	⊕	⊕	3	1	⊕	⊕	⊕	⊕	⊖	186	5	Punchy audio with superb control
Pioneer	VSX-920	£500	7 x 140W	⊖	⊖	4	1	⊕	⊕	⊕	⊕	⊕	185	4	Cool iPod integration, lacks guts a bit
Sony	STR-DH810	£300	7 x 140W	⊖	⊖	4	1	⊕	⊕	⊕	⊖	⊖	186	4	Easy to use. Impressive audio
Yamaha	RXV-3067	£1,500	7 x 140W	⊖	⊕	8	2	⊕	⊕	⊕	⊕	⊕	194	4	Superb and musical reproduction
Yamaha	RXV-367	£200	5 x 120W	⊖	⊖	4	1	⊕	⊖	⊖	⊖	⊖	191	3	Budget spec and sound to match
Yamaha	RXV-471	£300	5 x 105W	⊖	⊖	4	1	⊕	⊕	⊕	⊖	⊖	199	4	Brilliant sounding entry-level AVR
Yamaha	RXV-1067	£850	7 x 105W	⊖	⊕	8	2	⊕	⊕	⊕	⊕	⊖	190	4	Optimised for cinema. Good connects

Systems



Manufacturer	Model	Price	3D	Claimed power	Configuration	Dolby True HD	DTS HD MA	HDMI in/out	Component	Online portal	Wi-fi ready	Issue	Rating	Comment
Harman/Kardon	BDS800	£1,100	⊖	525W	5.1	⊕	⊕	0/1	⊖	⊖	⊖	194	3	Nil by 1080p24. OK performance
LG	HB-965TZ	£600	⊖	1,100W	5.1	⊕	⊕	2/1	⊕	⊕	⊕	187	4	Lovely flat speakers and excellent GUI
Panasonic	SC-BTT775	£400	⊕	1,000W	5.1	⊕	⊕	2/1	⊖	⊕	⊕	198	3	A decent starter system for AV novices
Panasonic	SC-BTT350	£370	⊕	1,000W	5.1	⊕	⊕	0/1	⊖	⊕	⊕	190	3	Sonics don't match the versatility
Panasonic	SC-BT320	£400	⊖	1,000W	5.1	⊕	⊕	1/1	⊕	⊕	⊖	187	2	Pics are ok but a right pain to use
Panasonic	SC-BT330	£500	⊖	1,000W	5.1	⊕	⊕	0/1	⊖	⊕	⊕	183	4	Great BD deck; decent audio performer
Samsung	HT-D6750W	£800	⊕	1,300W	5.1	⊕	⊕	2/1	⊕	⊕	⊖	197	3	Claims to be 7.1 but isn't
Samsung	HT-C9950W	£2,000	⊕	1,000W	7.1	⊕	⊕	2/1	⊕	⊕	⊕	190	4	Perfect style match for Samsung's TVs
Samsung	HT-C6730	£600	⊖	1,330W	7.1	⊕	⊕	1/1	⊕	⊕	⊕	187	4	Room-filling sonics; wireless rear speakers
Sony	BDV-E370	£500	⊕	850W	5.1	⊕	⊕	0/1	⊕	⊕	⊕	187	3	Good sound at low volume; SACD playback

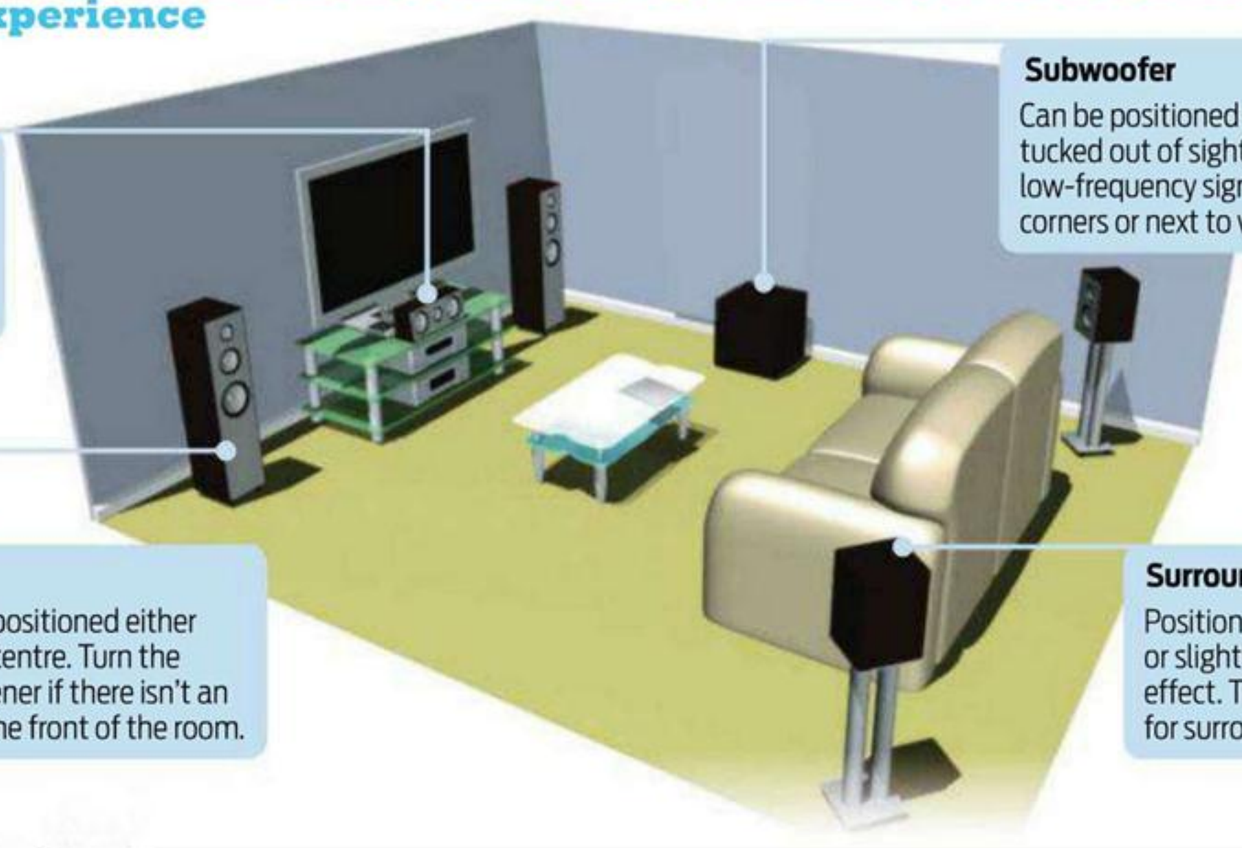
Speakers



Manufacturer	Model	Price	Configuration	Front max power	Rear max power	Centre max power	Sub power	bookshelf	Issue	Rating	Comment
Acoustic Energy	Aegis Neo V2	£1,000	5.1	2 x 120W	2 x 120W	120W	200W	all	184	1 2 3 **4** 5	**Likes to be driven hard. Tasty looks**
Acoustic Energy	Aegis Neo Max	£1,900	7.1	2 x 200W	2 x 170W	120W	200W	surr	199	1 2 3 4 **5**	**With 2 x 120W surrounds. An awful lot of speakers for the money**
Bowers & Wilkins	800 Diamond	£22,500	5.1	2 x 500W	2 x 120W	300W	1,000W	no	196	1 2 3 4 **5**	**Breathtaking sound, bonkers price**
Cambridge Audio	Minx S325	£800	5.1	2 x 75W	2 x 75W	75W	300W	all	195	1 2 3 **4** 5	**Extraordinary power for dinky size**
Canton	CD 105	£500	5.1	2 x 100W	2 x 100W	100W	100W	all	196	1 2 3 **4** 5	**Potent but suited to smaller areas**
Canton	Vento 800	£6,650	5.1	2 x 140W	2 x 80W	85W	750W	rear	194	1 2 3 4 **5**	**Fab definition & fidelity**
Crystal Acoustics	TX-T2-12	£1,300	5.1	2 x 150W	2 x 100W	100W	200W	rear	185	1 2 3 **4** 5	**Powerful but can sound brash**
Crystal Acoustics	BPT5	£600	5.1	2 x 125W	2 x 125W	125W	120W	no	187	1 2 **3** 4 5	**Bipoles suited to smaller rooms**
Eclipse	Time Domain	£16,500	5.1	2 x 70W	2 x 70W	70W	500W	no	189	1 2 3 **4** 5	**Gorgeous design and articulation**
EMP Tek	Impression	£4,000	7.1	2 x 200W	2 x 200W	120W	100W	surr	193	1 2 3 **4** 5	**With 2 x 100W surrounds. Thrilling**
Image Audio	IA 8/5/C	£4,000	5.0	2 x 150W	2 x 150W	300W	n/a	no	195	1 2 3 **4** 5	**Excellent flat panel speakers**
KEF	T-Series T205	£1,500	5.1	2 x 150W	2 x 100W	150W	250W	no	192	1 2 3 4 **5**	**Skinny and stylish. Immersive**
Klipsch	HD Theatre	£500	5.1	2 x 100W	2 x 100w	100W	100W	all	192	1 2 3 **4** 5	**Horn tweeters are a tad rough**
Magnat	Quantum 650	£1,700	5.1	2 x 350W	2 x 180W	180W	270W	rear	198	1 2 3 **4** 5	**Potent system at a good price**
Monitor Audio	Apex	£2,425	5.1	2 x 100W	2 x 100W	200W	500W	rear	190	1 2 3 4 **5**	**Luxury styling and performance**
Monitor Audio	Bronze BX	£1,350	5.1	2 x 120W	2 x 80W	120W	200W	rear	191	1 2 **3** 4 5	**Sub strains to keep up.**
Monitor Audio	Silver RX6 AV12	£2,200	5.1	2 x 125W	2 x 125W	80W	500W	rear	184	1 2 3 **4** 5	**Dynamic, detailed and engaging**
Pioneer	S71	£2,600	5.1	2 x 130W	2 x 130W	130W	280W	rear	194	1 2 3 **4** 5	**Immersive sound. Severe looking**
PSB	Image Series	£1,500	5.1	2 x 200W	2 x 150W	150W	150W	rear	199	1 2 3 **4** 5	**Look great, sound tasty**
PSB	Imagine Series	£3,000	5.1	2 x 200W	2 x 150W	150W	500W	rear	188	1 2 3 4 **5**	**Unexpected impact for the price**
Q Acoustics	2000 series	£550	5.1	2 x 75W	2 x 75W	100W	140W	all	185	1 2 3 **4** 5	**Detailed, compact sub/sat system**
Stealth Acoustics	LR Series 7.2	£7,000	7.2	2 x 200W	4 x100W	200W	2 x 200W	no	189	1 2 3 **4** 5	**'Invisible' flat surface speakers**
Tannoy	Definition	£8,200	5.0	2 x 400W	2 x 350W	350W	n/a	rear	197	1 2 3 4 **5**	**Worth every penny. Bring on the sub**
Tannoy	Arena HL 300	£1,850	5.1	2 x 75W	2 x 75W	75W	300W	no	198	1 2 3 **4** 5	**High-end sub/sats with style**
Teufel	Columa 100	£350	5.1	2 x 100W	2 x 100W	100W	100W	no	195	1 2 3 **4** 5	**Energetic floorstanders. Ace sub**
Teufel	Theatre 200	£800	5.1	2 x 140W	2 x 150W	140W	250W	all	195	1 2 3 **4** 5	**Bold sats, sub suffers colouration**
Quadral	Chromium 5.1	£2,700	5.1	not given	not given	not given	150W	rear	197	1 2 3 **4** 5	**Top quality drivers, nice cabinets**
XTZ	99 Series	£2,200	5.1	2 x 550W	2 x 100W	100W	300W	no	193	1 2 3 4 **5**	**Big, tunable sound. Mail-order**

5.1 CLASSIC HOME CINEMA SPEAKER LAYOUT...

Follow these simple rules when laying out your system and you'll be guaranteed a great listening experience



Centre speaker
Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible.

Subwoofer
Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

Front speakers
Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

Surround speakers
Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds.

Projectors



Manufacturer	Model	Price (Original)	Type	Resolution	3D	HDMI	Component	12V trigger	Fan noise/dB	lamp life/hr	Issue	Rating	Comment
BenQ	W1100	£900	DLP	1920 x 1080	⊖	2	1	1	22	2,500	197	4	Dynamic images, noisy fan
BenQ	W1000+	£750	DLP	1920 x 1080	⊖	2	1	1	26	5,000	193	5	Performance transcends price
Casio	XJ-A235	£1,000	DLP	1280 x 800	⊖	1	0	0	29	20,000	192	3	LED/DLP hybrid. Poor pics
Epson	EH-TW3600	£1,300	LCD	1920 x 1080	⊖	2	1	1	22	4,000	193	3	Bright pics but average black levels
Epson	EH-TW5500	£4,000	LCD	1920 x 1080	⊖	2	1	1	22	4,000	181	4	Easy and flexible to set up
InFocus	SP8600	£800	DLP	1920 x 1080	⊖	2	1	1	30	2,500	198	4	Excellent sub-£1k projector
InFocus	SP8604	£2,500	DLP	1920 x 1080	⊖	3	1	2	28	3,000	196	4	Versatile PJ with decent pictures
InFocus	SP8602	£3,000	DLP	1920 x 1080	⊖	2	3	3	28	2,500	182	4	Good pics with minor operating flaws
JVC	DLA-X3	£3,600	D-ILA	1920 x 1080	⊕	2	1	1	20	3,000	193	4	Aces 2D images, X-talk with 3D
JVC	DLA-X7	£5,550	D-ILA	1920 x 1080	⊕	2	1	1	20	3,000	195	5	Brightness and black level to die for
JVC	DLA-HD990	£9,000	D-ILA	1920 x 1080	⊖	2	1	1	19	3,000	185	5	Gorgeous with amazing black levels
Optoma	HD67N	£500	DLP	1280 x 720	⊖	1	2	0	29	3,000	194	3	With so-so 3D using a 3D-Xl adapter
Optoma	HD20	£900	DLP	1920 x 1080	⊖	1	2	0	29	4,000	176	4	One of the first budget Full HD PJs
Panasonic	PT-AE4000	£2,500	LCD	1920 x 1080	⊖	2	1	1	22	2,000	177	4	Filmic pictures and easy to setup
Runco	LS-5	£7,500	DLP	1920 x 1080	⊖	2	2	2	30	4,000	187	5	3-chip performance from one chip
Sanyo	PLV-Z4000	£1,800	LCD	1920 x 1080	⊖	2	2	1	19	3,000	191	4	Quiet. Yellow-ish but filmic images
Sharp	XV-Z17000	£4,000	DLP	1920 x 1080	⊕	2	1	0	n/a	n/a	196	4	Living room friendly, 3D impresses
SIM2	MICO 40	£11,000	DLP	1920 x 1080	⊖	2	1	2	n/a	30,000	189	5	Eco-friendly LED-lit and versatile
SIM2	C3X Lumis Uno	£19,000	DLP	1920 x 1080	⊖	2	1	3	32	2,500	184	4	Supreme pics but lacks manual iris
SIM2	Lumis 3D-S	£30,000	DLP	1920 x 1080	⊕	2	1	3	n/a	3,000	199	5	Reference level 3D projector
Sony	VPL-VW90ES	£5,400	SXRD	1920 x 1080	⊕	2	1	1	22	n/a	192	5	Bright pics but average black levels
Sony	VPL-VW85	£5,400	SXRD	1920 x 1080	⊖	2	1	1	20	3,000	174	4	Elderly but impressive SXRD PJ
Sony	VPL-HW20	£2,400	SXRD	1920 x 1080	⊕	2	1	0	20	n/a	190	5	Complex but capable of greatness
ViewSonic	PRO8200	£900	DLP	1920 x 1080	⊖	2	1	1	27	3,000	192	3	Falters with motion resolution
Vivitek	H9080FD	£10,000	DLP	1920 x 1080	⊖	2	1	1	n/a	4,000	173	4	World's first 'lampless' LED projector
Vivitek	H1085	£1,000	DLP	1920 x 1080	⊖	2	1	1	26	4,000	179	4	Affordable DLP PJ could be quieter
Vivitek	H5080	£2,700	DLP	1920 x 1080	⊖	3	1	2	27	2,000	186	4	Excellent contrast and colour. Noisy

PROJECTOR SCREENS EXPLAINED...

FIXED FRAME OR ROLL AWAY?

When buying a projector, it's important to think about what screen you're going to partner it with. There are two main approaches – fixed-frame, where the screen is placed in a rigid frame and attached permanently to the wall, or 'roll-away' where it can be rolled up when not in use, including via neat, motorised systems. For the best picture quality and dedicated cinema rooms, fixed frame is preferable, as permanent screens generally stay more tautly stretched and deliver the most accurate pictures. Roll-away screens are more suited to when the room needs to double as a living room. Pricing, of course, varies depending on what size you need.

Editor's Choice...



SONY
SXRD → VPL-VW90ES
→ £5,400 Approx

Sony's range-topping projector marries an exemplary 2D picture performance with one of the best active shutter 3D systems we've seen. And, aside from its video prowess, it features smart design, solid build and versatile installation options.

Tested: Issue 192
For more info visit: www.sony.co.uk/biz

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Media Players



Manufacturer	Model	Price	Type	HDD	3D	HDMI	DLNA	Online portal	USB playback	Wi-fi ready	Issue	Rating	Comment
AC Ryan	PlayOn! HD Essential	£130	Player	1TB	⊖	1	⊖	⊖	⊕	⊕	194	4	No wired Ethernet option, so you have to network via wi-fi dongle
Boxee	Boxee Box	£200	VOD	⊖	⊖	1	⊕	⊕	⊖	⊕	193	3	iPlayer access. Browser is a pain to use
Buffalo	Linkstation Pro LS-VL	£170	NAS	1TB	⊖	⊖	⊕	⊖	⊕	⊖	192	4	Speedy and reliable with Bit Torrent client. 1.5TB and 2TB versions are also available
Crystal Acoustics	PICOHD5.1	£50	Player	⊖	⊖	1	⊖	⊖	⊕	⊖	199	3	Small, no frills media player
Digital Stream	DPS-1000	£90	VOD	⊖	⊖	1	⊕	⊕	⊕	⊕	196	4	Good for VOD services, no optical out
Iomega	StorCenter IX2-200	£215	NAS	2TB	⊖	0	⊕	⊖	⊕	⊕	182	4	Pocket-sized powerhouse with handy one-touch USB copy
Iomega	Screenplay MX	£140	Player	1TB	⊖	1	⊖	⊖	⊕	⊖	194	4	No optical audio out or hi-res audio
Iomega	Screenplay MX TV Link Director's Edition	£90	Player	⊖	⊖	1	⊕	⊕	⊕	⊕	185	3	This wallet-friendly player is well-specified, but the lack of a search function can make trawling content a pain
iXtreamer	iXtreamer	£150	NAS	⊖	⊖	1	⊕	⊕	⊕	⊕	199	5	Slick player with space for SATA HDD
Netgear	NeoTV 550	£140	Player	⊖	⊖	1		⊕	⊕	⊕	199	4	Solid offering but file support isn't comprehensive
Netgear	ReadyNAS NVX	£500	NAS	1TB	⊖	0	⊕	⊕	⊕	⊕	185	4	Tank-like NAS can accommodate up to 8TB of storage – a serious bit of hardware
Pogoplug	PogoPlug	£100	Player	⊖	⊖	0	⊕	⊖	⊕	⊖	184	4	A bizarre-looking player but very efficient
Popbox	Popbox 3D	£140	Player	⊖	⊕	1	⊕	⊕	⊕	⊕	199	4	Offers BBC iPlayer and MKV3D file support
Sony	SMP-N100	£120	VOD	⊖	⊖	1	⊕	⊕	⊕	⊕	193	4	Bravia Internet TV and streaming aplenty
Synology	USB Station 2	£85	Player	⊖	⊖	⊖	⊕	⊖	⊕	⊖	193	4	Simply add your own USB hard disks
Synology	DS410	£400	Player	⊖	⊖	⊖	⊕	⊖	⊕	⊖	190	4	Accommodates up to 8TB of SATA drives
Toshiba	Stor.E TV+	£170	Player	1TB	⊖	1	⊕	⊖	⊕	⊖	195	3	Tosh's cute unit supports a wide range of formats
Verbatim	MediaShare	£130	NAS	1TB	⊖	1	⊕	⊕	⊕	⊕	188	4	Stylish, well-featured NAS
WD	WD TV Live Hub	£200	Player	1TB	⊖	1	⊕	⊖	⊕	⊕	190	5	Superb multi-format player
WD	WD TV Mini	£48	Player	⊖	⊖	0	⊖	⊖	⊕	⊖	189	5	Tiny media player lacks HDMI output

HOME CINEMA Choice

ISSUE #201 ON SALE Oct 20

In the next issue

2012 Tech Preview What the AV giants have in store for you next year
Projector wars Behind the scenes at Epson and Panasonic
X-Men: First Class Filmmaker Bryan Singer on why home cinema matters

On test

SONY VPL-VW30ES Affordable SXRD projector **TOSHIBA 47VL853** FIrst look at Toshiba's Passive 3D Smart TV **NAD T 757** AVR with futureproofed upgrading system **MARANTZ** Slimline receiver takes aim at entry-level rivals **ROUNDUP** Freeview HD [illegible] es **PLUS:** In depth news, BD rev[illegible]s and more

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Recorders



Manufacturer	Model	Price	Type	HDD/GB	HDMI	Component	Scart	USB Media	Online portal	Wi-fi ready	Issue	Rating	Comment
3View	3VHD	£300	F'view HD	500	1	0	1	⊕	⊕	⊖	193	1 2 3 4 5	Good recorder, scant internet TV offering
Digitalstream	DHR8205U	£300	F'view HD	500	1	0	1	⊕	⊖	⊖	185	1 2 3 4 5	Below-par standard def pics. Handy CI slot
Echostar	HDS-600RS	£350	F'sat HD	500	1	0	2	⊕	⊕	⊖	196	1 2 3 4 5	Solid PVR with built-in SlingPlayer feature
Humax	HDR-FOX T2	£330	F'view HD	250	1	0	1	⊕	⊕	⊕	190	1 2 3 4 5	Lovely to use with great quality results
Panasonic	DMR-BWT700	£500	F'view HD	320	1	0	2	⊕	⊕	⊕	197	1 2 3 4 5	Complex with Blu-ray recorder and 3D player
Samsung	SMT-S7800	£280	F'sat HD	500	1	0	2	⊕	⊕	⊕	197	1 2 3 4 5	Good recorder, scant internet TV offering
Samsung	BD-D8500	£380	F'view HD	500	1	1	0	⊕	⊕	⊕	194	1 2 3 4 5	With 3D Blu-ray deck. Only records one tuner
TVonics	DTR-Z500HD	£230	F'view HD	500	3	0	1	⊕	⊖	⊖	196	1 2 3 4 5	Handy HDMI switcher, dire for multi-media
Virgin Media	TiVo	£200	Cable TV	1TB	1	0	1	⊖	⊕	⊖	195	1 2 3 4 5	Awesome 3- tuner PVR. No BBC red button

Subwoofers



Manufacturer	Model	Price	Sealed/ported	Power (RMS)	Frequency response/Hz	Driver size	Dimensions/ (w x h x d)mm	Weight/kg	Issue	Rating	Comment
BK Electronics	XXLS400DF	£410	S	400W	19-120	12in	400 x 460 x400	28	196	1 2 3 4 5	Clean and tight; great value
Bowers & Wilkins	DB1	£3,250	S	1,000W	17-45	12in x 2	460 x 490 x 410	44	197	1 2 3 4 5	Bipolar arrangement, ripping
Paradigm	Seismic 110	£1,250	S	850W	18-150	10in	298 x 343 x 320	17	188	1 2 3 4 5	AKA The Bulldog and has real bite
Paradigm	SUB1	£5,000	S	1,700W	35-150	8in x 6	505 x 516 x 455	50	197	1 2 3 4 5	Unorthodox hexagonal shape
Polk Audio	microPro 2000	£1,200	S	1,200W	22-200	8in	280 x 321 x 324	15	186	1 2 3 4 5	Easy to use, versatile, mega sound
REL	T3	£430	S	150W	30-120	8in	300 x 343 x 356	13	186	1 2 3 4 5	Amazing sound for compact size
SV Sound	PC 12 Plus DSP	£1,250	P	800W	10-150	12.5in	1,022 x 407	39	198	1 2 3 4 5	Cylindrical sub for big spaces
Velodyne	CHT-15Q	£1,200	P	750W	23-120	15in	467 x 533 x 527	34	189	1 2 3 4 5	Great handset and EQ set-up
Velodyne	DD18+	£5,800	S	1,250W	8.8-300	18in	530 x 580 x 650	65	197	1 2 3 4 5	Huge 18in driver, muscular sound

Soundbars



Manufacturer	Model	Price	Power	Separate sub	Sub power	HDMI in	HDMI out	Dolby True HD	DTS HD MA	Dimensions/ (w x h x d)mm	Weight/kg	Issue	Rating	Comment
Lenco	SB-100	£140	80W	⊖	N/A	0	0	⊖	⊖	540 x 110 x 165	1.4	199	1 2 3 4 5	Budget, but '3D' effect is good
Orbitsound	T12	£300	80W	⊕	20W	0	0	⊖	⊖	605 x 100 x 110	2.8	186	1 2 3 4 5	Offers integrated iPod dock
Panasonic	SC-HTB520	£300	120W	⊕	120W	1	1	⊖	⊖	1002 x 80 x 50	2.5	199	1 2 3 4 5	HDMI but no TrueHD/DTS-HD
Samsung	HWC450	£250	160W	⊕	120W	0	0	⊖	⊖	957 x 92 x 46	2.3	182	1 2 3 4 5	Affordable, has wireless sub
Teufel	Cinebar 50	£670	200W	⊕	150W	0	0	⊖	⊖	1010 x 130 x 100	8	182	1 2 3 4 5	Punchy sound but not cheap
Yamaha	YSP-2200	£800	132W	⊕	100W	3	1	⊕	⊕	435 x 137 x 350	6	196	1 2 3 4 5	Effective surround sound

LIGHTING

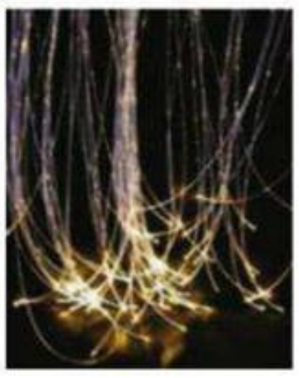
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Growing numbers of professional home cinema installers in the UK are turning to Starscape for fibre optic and LED solutions, not to mention our professional customers in Belgium, Switzerland, Portugal, South Africa, the Czech Republic and South Africa.

Photo: Artcoustic SA and Sphere Custom Design

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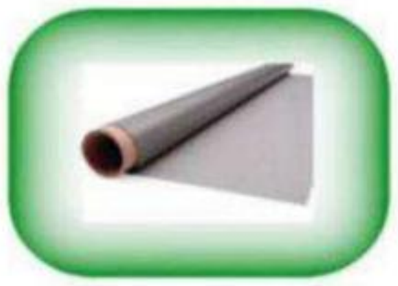
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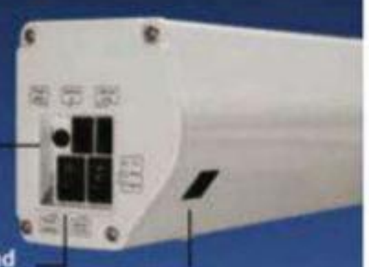
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POINT OF VIEW

Richard Stevenson asks whether discreet, wall-mounted install speakers will make surround sound more appealing to the mass market

I have always wanted my home cinema room to look like the bridge of the Enterprise. I want to sit in that big swivel chair, open the screen with the touch of a button, and play a movie with no more than a wag of the finger and the phrase, 'make it so'. And, as any Trekkie will know, that makes my bridge an NCC-1701-D.

Like most home cinema enthusiasts who have ever gazed at the stunning architectural results of a professional 'Enterprise Bridge' cinema room, (and there are many), it remains a dream. I don't have the money and I definitely don't have the space to recreate the look, let alone fit a turbo lift and a 10-man crew. They would probably be distracting if you were watching anything but *Star Trek* anyway.

Interestingly, though, I wonder if these epic, high-end AV installations might just be the saviour of home cinema as we mere mortals know it. You see, the mass market has all but forgotten about home cinema and surround sound. They have been brainwashed with widescreen, high-definition, 3D and VOD video for over a decade and have heard little about surround sound, quite literally. Many don't even realise what they are missing by watching movies with nothing but their TV's crappy audio. In my world, they would all be wearing red crew shirts, of course.

Now I don't mean that everyone with a 42in plasma will see a high-end install in a magazine and rush out to find a swivel chair and an installer ready to relieve them of £100K. In fact, it will probably do little for their perception of home cinema as an audio as well as visual experience because most of the speakers are hidden. But it is that very trend for discreet loudspeakers at the high end that has forced almost every loudspeaker maker on the planet to develop a wide range of flush-mounted, in-wall, in-ceiling, in-floor or [illegible]-wall speakers for discreet installation. In fact, [illegible] living room has been the number one reason for people not installing surround sound for nearly 20 years now. To make matters worse, in those two decades, new-build houses and flats have got a lot smaller and the trend for 'sleek' home styling continues to sweep the UK like a plasma plague. Thanks to the install market, from Picard's bridge to 1940's retro theatres, there is now a fabulous array of very affordable and truly discreet speakers designed to cloak your surround sound audio.

The US market has already gone install speaker mad with all but the cheapest of new homes featuring multi-room install speakers as standard. Okay, most US homes have the advantage of hollow-wall construction, which helps the retro-fitting of in-wall speakers. But UK dwellings are increasingly being built in the same way, with flimsy stud walls being used almost exclusively on the inside these days. Frankly, it is little wonder most new flats wobble like a Kirk-era film set.

Tricks with bricks

Even if you have a brick and block home, there is a growing number of very good on-wall speakers that are no more intrusive than a chunky framed painting. With speakers such as Kef's T-Series or Monitor Audio's SoundFrame, simply chasing and burying speaker cables in the plaster when you decorate will give the sort of finish that Laurence Llewelyn-Bowen would approve of.

The future of home cinema hangs in the balance, despite the UK's predilection for big screen visual entertainment. Perhaps these wow-factor installations may just bring discreet speakers to the attention of the masses, while reinvigorating true surround sound home cinema. It's a bold concept but on the Starship *HCC* we will always boldly go...

Are you about to cut holes in your plasterboard for speakers? Let us know by e-mailing hcc@futurenet.com



Richard Stevenson has never got over being denied entry to a Trekkie conference because his home cinema wasn't Enterprise grade

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